

ESTD : 1987

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**ಶ್ರೀ ಚನ್ನಗಿರಿಶ್ವರ ಪ್ರಸಾದಿಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ದಂ. ದಾ. ಶಿರೋಲ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ,**



(ತಾ. ಮುಧೋಳ) **ಮಹಾಲಿಂಗಪುರ - 587 312.** (ಜಿ. ಬಾಗಲಕೋಟೆ)

( ನ್ಯಾಕನಿಂದ ಮರು ಮಾನ್ಯತೆ 'B++2.81' CGPA )

KLE Society's

**SHRI CHANNAGIRISHWAR PRASADIK ARTS, SCIENCE AND D.D. SHIROL COMMERCE COLLEGE,**

Tq : Mudhol

**MAHALINGPUR - 587 312.**

Dist : Bagalkot

( NAAC Re-accredited 'B++' 2.81 CGPA )

ಉಲ್ಲೇಖ ಸಂಖ್ಯೆ : ಡಿ.ಸಿ./..... /.....

ದಿನಾಂಕ : 03/06/2022

### Declaration

This is to declare that KLE Society's Shri Channagirishwar Prasadik Arts, Science & D.D. Shirol Commerce College, Mahalingpur-587312, Dist. Bagalkot is affiliated to the Rani Channamma University, Belagavi. The Syllabus for all courses offered by our institution across all the programs for the years 2016-17, 2017-18, 2018-19 and 2019-20 was same i.e., Non-CBCS Syllabus. From the year 2020-21 affiliating university introduced CBCS Syllabus for all the courses across all the programs.

GRADE-1 PRINCIPAL

K.L.E.Society's

S.C.P.Arts, Science & D.D.S Commerce College  
MAHALINGPUR-587312. Dist. Bagalkot.

**ಶ್ರೀ ಚನ್ನಗಿರೀಶ್ವರ ಪ್ರಸಾದಿಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ದಂ.ದಾ. ಶಿರೋಲ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ,**



(ತಾ. ಮುದ್ದೋಳ) ಮಹಾಲಿಂಗಪುರ - 587 312. (ಜಿ. ಬಾಗಲಕೋಟೆ)

( ಸ್ವಾಕರ್ಮದ ಮರು ಮಾನ್ಯತೆ 'B++2.81' CGPA )

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**SHRI CHANNAGIRISHWAR PRASADIK ARTS, SCIENCE AND D.D. SHIROL COMMERCE COLLEGE,**

Tq : Mudhol

**MAHALINGPUR - 587 312.**

Dist : Bagalkot

( NAAC Re-accredited 'B++' 2.81 CGPA )

ಅಧ್ಯಯನ ಸಂಖ್ಯೆ : 22./..... /.....

ದಿನಾಂಕ : 17/03/2022

**List of Courses offered by the Institution across all programs during the year 2020-21**

Sl. No	Program Name	Course Name
1	Bachelor of Arts - English	Understanding Literature I
2		Understanding Literature - II
3		English Literature (Romantic and Victorian Age: 1798-1900) and Representative Text
4		English Literature (20th Century) and Representative Text
5		Literary Criticism
6		Indian English Literature, Translation Studies and Representative Text
7		Study of English Language and English Phonetics
8		Study of Classics and Modern Literary Theories
9	Bachelor of Arts - Kannada	History of Kannada Literature & Study of Ragale Literature
10		Modern History of Kannada Literature & Study of Types of Novels
11		Poetics & Study of Types of Stories (Indian & Western)
12		Rhetoric and Kannada Prosody - Study of Modern Kannada Poems
13		Introductory Study of Kannada Folk Literature and Types of Yakshagana
14		Prosody and Rhetoric in Kannada
15		Kannada Grammar and Linguistic Science
16		Study of Kannada Culture and Research Articles
17	Bachelor of Arts - Economics	Micro Economics
18		Macro Economics
19		Monetary Economics
20		International Economics
21		Macro Economics
22		Economics of Development
23		Public Finance and Fiscal Policy
24		Indian Economy



25	Bachelor of Arts - Agricultural Marketing	Micro economics
26		Macro Economics
27		Introducing to Agricultural Marketing
28		Value chain in Agricultural Marketing
29		Market Introduction & Future trading
30		Agricultural Economics
31		Co-operatives in agricultural Marketing
32		Indian Economy
33	Bachelor of Arts - History	History of India ( Early times of Kushanas)
34		History of India (From Gupta to 1206 AD)
35		History and Culture of Ancient India (From Early times to Cholas)
36		History of India from Md. Ghazani to Shivaji
37		History of Modern India (from 1707 AD to 1905 AD)
38		Modern Europe (1450 AD to 1914 AD )
39		History of Modern India Part II
40		Modern Europe (1914 AD to 1990 AD)
41	Bachelor of Arts - Political Science	Introduction to Political Theory
42		Western Political Thought
43		Indian Government and Politics
44		Karnataka Government & Politics
45		Public Administration
46		Modern Governments
47		International Relations
48		Political Processes & Institutions in India
49	Bachelor of Arts - Sociology	Principles of Sociology
50		Study of Indian Society
51		Study of Indian Social thought
52		Study of western sociological thought
53		Rural Development in India - Paper - I
54		Urban Society in India - Part - II
55		Basics of Social Research - Paper - I
56		Current Social Problems or Social Welfare in India
57	Bachelor of Arts - Journalism & Mass Communication	Introduction to Journalism
58		Introduction to Communication
59		Reporting
60		Editing
61		Media Laws
62		Radio and Advertisement
63		Photo Journalism and Cinema
64		Television Journalism and Internet



65	Bachelor of Science - Physics	Mechanics & Theory of Relativity
66		Electricity And Magnetism
67		Geometrical Optics & Electricity I
68		Physical Optics & Electricity II
69		Classical Mechanics, Electronics & Relativity
70		Quantum Mechanics & Spectroscopy
71		Solid State Physics, Nuclear Physics, Energy Sources, Digital Electronic & Special Materials
72		Integral Transforms, Optoelectronics, Communication, Programming & Integrated Electronics
73	Bachelor of Science - Chemistry	Chemistry
74		Chemistry
75		Chemistry
76		Chemistry
77		Chemistry P-I
78		Chemistry P-II
79		Chemistry P-I
80		Chemistry P-II
81	Bachelor of Science - Mathematics	Algebra I & Calculus
82		Practical - Metrics, groups & mean value theorem
83		Calculus II & 3 Dimensional Geometry
84		Practical - Curves, 3D Geometry and Reduction formula
85		Mathematical Logics And Real Analysis - Paper I
86		Group-I, Integral Calculus and Differential Equation I - Paper II
87		Vector Calculus and Infinite series - CBCS
88		Group II, Fourier Series and Differential Equation II
89		Real Analysis Paper - I
90		Numerical Analysis Paper - II
91		Dynamics and Calculus of variation Paper- III
92		Differential equations Paper - I
93		Complex Analysis and Ring theory - II
94		Topology and Laplace Transform - III
95	Bachelor of Science - Botany	Biodiversity (Microbes, Algae, Fungi & Archegoniate)
96		Plant Ecology and Diversity of Angiosperms
97		Plant Anatomy and Embryology
98		Plant Physiology and Biochemistry
99		Plant breeding, Tissue culture and Horticultural practices
100		Ecology, Environmental Biology, and Phytogeography
101		Cytology, Genetics & Evolution
102		Molecular biology, Biotechnology, and Immunology



145		Indian Economics
146		Computer Application in Business - V
147		Indian Financial Services
148		Goods and Service Tax-II
149	Master of Commerce	Corporate Strategic Management
150		Advance Marketing Management
151		Financial Management
152		Applied Economics For Business
153		Management Accounting
154		Stock Market Operations
155		Business Research Methods
156		Quantitative Techniques
157		Corporate Restructuring
158		Advance Corporate Accounting
159		Managerial Accounting
160		Investment Analysis and Portfolio Management
161		Indian Economy (OEC)
162		Business Research Methods
163		International Financial Management
164		Financial Markets And Institutions
165		Corporate Accounting
166		Accounting For Specialised Institutions
167		Statistics (OEC)
168		E-Commerce
169		International Business
170		Project Report
171		Security Analysis and Portfolio Management
172		Innovations In Accounting
173		Mutual Funds

*TQAC*  
**TQAC Co-ordinator**  
 K.L.E. Society's

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*GRADE-1 PRINCIPAL*  
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 K.L.E. Society's

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 MAHALINGPUR-587312, Dist. Bagalkot.

# **Course Structure of Under Graduates**

**Bachelor of Arts**

**2020-21**



# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

ENGLISH

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED SYSTEM (CBCS)



### 5. Course wise Credit Structure

#### Choice Based Credit System (CBCS) for BA Programme

##### Part 1: DSC - Discipline Specific Course (Optional English)

Sem	Course Code	Title of the Paper	Teaching Hours/Week	Credits	Marks		Total	Duration of Exam
					Sem End Exam	IA		
I	DSC ENG105	Understanding Literature – I	5	3	80	20	100	3 hrs
II	DSC ENG106	Understanding Literature – II	5	3	80	20	100	3 hrs
III	DSC ENG107	Understanding Literature – III	5	3	80	20	100	3 hrs
IV	DSC ENG108	Understanding Literature – IV	5	3	80	20	100	3 hrs

##### Part 2: DSE - Discipline Specific Elective (Optional English)

Sem	Course Code	Title of the Paper	Teaching Hours/Week	Credits	Marks		Total	Duration of Exam
					Sem End Exam	IA		
V	DSE ENG109	Literary Criticism and Theory	4	4	80	20	100	3 hrs
	DSE ENG110A	Linguistics and ELT	4	4	80	20	100	3 hrs
	DSE ENG110B	OR Media and Communication						
VI	DSE ENG111	The English Language and Phonetics	4	4	80	20	100	3 hrs
	DSE ENG112A	Indian English Literature	4	4	80	20	100	3 hrs
	DSE ENG112B	OR Translation Studies						





**Part 3: SEC - Skill Enhancement Course (Communicative English)**

Sem	Course Code	Title of the Paper	Teaching Hours/Week	Credits	Marks		Total	Duration of Exam
					Sem End Exam	IA		
III	SEC ENG113	Soft Skills	2	2	40	10	50	2 hrs
IV	SEC ENG114	Business Correspondence	2	2	40	10	50	2 hrs
V	SEC ENG115	Media and Communication	2	2	40	10	50	2 hrs
VI	SEC ENG116	Media Writing	2	2	40	10	50	2 hrs





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

KANNADA

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



Part 2: DSC- Discipline Specific Course (B.A Optional Kannada)

Sem	Course Code	Title of the Paper	Teaching Hours/Week	Credits	Marks		Total	Duration of Exam
					Sem End Exam	IA		
I	DSC KAN	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ	5	3	80	20	100	3 Hrs
II	DSC KAN	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ	5	3	80	20	100	3 Hrs
III	DSC KAN	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ	5	3	80	20	100	3 Hrs
IV	DSC KAN	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ	5	3	80	20	100	3 Hrs
V	DSC KAN	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ	5	3	80	20	100	3 Hrs
		ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ						
VI	DSC KAN	ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ	5	3	80	20	100	3 Hrs
		ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಇತಿಹಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿ						





# RANI CHANNAMMA UNIVERSITY

## BELAGAVI

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

ECONOMICS

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



**CBCS Based Syllabus Course Structure for B.A (UG)  
in Economics (Optional) (W.e.f. 2020-21 Onwards)**

Semester	Code/ Course	Paper No	Title of the Paper	Teach ing Hours Week	Credits	Marks			Duration of Sem End Exam
						IA	Sem End Exam	Total	
I	DSC 1	1	Micro Economics	5	3	20	80	100	3
II	DSC 2	2	Macro Economics	5	3	20	80	100	3
III	DSC 3	3	Public Economics	5	3	20	80	100	3
	SEC 1	4	Statistics for Economics	2	2	10	40	50	2
IV	DSC 4	5	International Economics	5	3	20	80	100	3
	SEC 2	6	Human Resource Management	2	2	10	40	50	2
V	DSE 1	7	1) Indian Economy	4	4	20	80	100	3
		7.1	2) Monetary Economics OR 3) Rural Development	4	4	20	80	100	3
	SEC 3	8	Financial Institutions and Markets	2	2	10	40	50	2
VI	DSE 2	9	1) Development Economics	4	4	20	80	100	3
		9.1	2) Environment Economics OR 3) Industrial Economics	4	4	20	80	100	3
	SEC 4	10	Economics of Tourism	2	2	10	40	50	2
				44	36				





**CBCS Based Syllabus Course Structure for B.A (UG)**

**Course in Agricultural Marketing (Optional) (W.e.f.2020-21 Onwards)**

Semester	Code/ Course	Paper No	Title of the Paper	Teaching Hours/ Week				Marks						Durati on
				Hours		Credits		IA		Sem End Exams		Total		
				T	P	T	P	T	P	T	P	T	P	
I	DSC-1	1	Micro Economics	4	3			20	10	80	40	100	50	
II	DSC-2	2	Macro Economics	4	3			20	10	80	40	100	50	
III	DSC-3	3	Introduction to Agril. Marketing	4	3			20	10	80	40	100	50	
IV	DSC-4	4	Value Chain in Agril. Marketing	4	3			20	10	80	40	100	50	
V	DSE-1	5	1. Market Information & Future Trading	4	3			20	10	80	40	100	50	
		5.1	2. Agricultural Economics OR 3. E-Commerce & Agri-Business	4	3			20	10	80	40	100	50	
VI	DSE-2	6	1. Co-operatives in Agril. Marketing	4	3			20	10	80	40	100	50	
		6.1	2. Indian Economy OR 3. Agricultural Input Marketing	4	3			20	10	80	40	100	50	
				32	24									

T= Theory    P= Practical





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

HISTORY & ARCHAEOLOGY

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)





Semester	Code/ course	Paper No	Paper	Teaching Hrs/Week	Duration of Exams Hrs	Exams		Total	Credit Value
						T.A.	Exam		
I	DSC-1	1	History of India (Early Times to Kushanas)	05	03	20	80	100	03
II	DSC-2	2	History of India (From Gupta to 1206 A.D.)	05	03	20	80	100	03
III	DSC-3	3	History of India -1206 - 1526 A.D.	05	03	20	80	100	03
	SEC-1	4	Architecture of Karnataka	02	02	10	40	50	02
IV	DSC-4	5	History of India- 1526 -1707 A.D.	05	03	20	80	100	03
	SEC-2	6	Museum Exhibition skills Development	02	02	10	40	50	02
V	DSC-1	7	1)History of India - British Rule - 1707- 1947 A. D. - Paper I Compulsory	04	04	20	80	100	04
		7.1	2) History and Culture of Karnataka (From Early to 1336 A.D.) OR 3)History of Modern Europe (1450 -1914 A.D.) OR 4) History of Tourism and Heritage	04	04	20	80	100	04
	SEC-3	8	Information Technology in Tourism	02	02	10	40	50	02
VI	DSC-2	9	1)History of Modern India- Paper I Compulsory	04	04	20	80	100	04
		9.1	2) History of Modern Karnataka 1336-1956 A.D. OR 3)History of Modern Europe (1914-1990 A.D.) OR 4) History of Modern Tourism	04	04	20	80	100	04
	SEC-4	10	Guiding Skill & Personality Development	2	2	10	40	50	2
				44	36				30





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

POLITICAL SCIENCE

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
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CHOICE BASED CREDIT SYSTEM (CBCS)



Sl.No.	Semester	Papers	Th. Marks
1.	1 <sup>st</sup> semester	Paper-I: Introduction to Political Theory	80 Marks
2.	2 <sup>nd</sup> semester	Paper-II: Western Political Thought	80 Marks
3.	3 <sup>rd</sup> semester	Paper-III: Indian Political Thought	80 Marks
		Political Reporting (Skill Enhancement Courses (SEC))	50 Marks
4.	4 <sup>th</sup> semester	Paper-IV: International Relations and Organizations	80 Marks
		Dimension of Politics (Skill Enhancement Courses (SEC))	50 Marks
5.	5 <sup>th</sup> semester PAPER 5.1 PAPER 5.2	Paper-V (compulsory) Public Administration	80 Marks
		Paper-V (A) Optional- Public Policy Making in India Or	80 Marks



		Paper-V (B) Optional E-Governance	
	5 <sup>th</sup> semester	Governance in India (Skill Enhancement Course) (SEC)	50 Marks
6.	6 <sup>th</sup> semester PAPER 6.1 PAPER 6.2	Paper-VI (compulsory) Indian Government and Politics	80 Marks
		Paper-VI (A) Optional- Local Government in India  Or Paper-VI (B) Optional Foreign Policy of India	80 Marks
	6 <sup>th</sup> semester	A Course on Research Methodology (Skill Enhancement Course) (SEC)	50 Marks





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

SOCIOLOGY

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



**B.A. Sociology (Optional)**  
**CBCS Syllabus (UG)**  
**(W.e.f. 2020-21 Onwards)**

Semester	Code/ Course	Paper No	Title of the Paper	Teaching Hours/ Week	Credits	Marks			Duration of Sem. End Exam
						IA	Sem. End Exam	Total	
I	ASOCDSC 1	1	Principles of Sociology	5	3	20	80	100	3
II	BSOCDSC 2	2	Study of Indian Society	5	3	20	80	100	3
III	CSOCDSC 3	3.1	Indian Social Thinkers	5	3	20	80	100	3
	CSOCSEC 1	3.2	Personality Development and Communication Skills	2	2	10	40	50	2
IV	DSOCDSC 4	4.1	Study of Western Sociological Thought	5	3	20	80	100	3
	DSOCSEC 2	4.2	Health and Sanitation	2	2	10	40	50	2
V	ESOCDSC 5	5.1	Rural Development in India	4	4	20	80	100	3
	ESOCDSE 1	5.2(a)	Urban Society in India or 5.2(b) Social Demography	4	4	20	80	100	3
		ESOCSEC 3	5.3	Sociology of Tourism	2	2	10	40	50
VI	FSOCDSC 6	6.1	Basics of Social Research	4	4	20	80	100	3
	FSOCDSE 2	6.2(a)	Current Social Problems or 6.2(b) Social Welfare in India	4	4	20	80	100	3
		FSOCSEC 4	6.3	Society, Mass Media and Communication	2	2	10	40	50
				44	36				

DSC: Discipline Specific Course

DSE: Discipline Specific Elective

SEC: Skill Enhancement Course





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF ARTS

MASS COMMUNICATION AND JOURNALISM

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under


CHOICE BASED SEMESTER SYSTEM (CBCS)




## MASS COMMUNICATION AND JOURNALISM

(w.e.f. 2020-21 ONWARDS)

Semester	Code/course	Paper No.	Title of the paper	Teaching hrs per week	Marks				Duration of Sem end exam
					Credits	IA	Sem end exam	Total	
I	DSC-1	1	Introduction to Journalism	3	3	20	80	100	3
II	DSC-2	2	Introduction to Communication	3	3	20	80	100	3
III	DSC-3	3	Reporting	3	3	20	80	100	3
	SEC-1	4	Writing Skills	2	2	10	40	50	2
IV	DSC-4	5	Editing	3	3	20	80	100	3
	SEC-2	6	Audio Visual Media	2	2	10	40	50	2
V	DSE-1	7	Media Law	4	4	20	80	100	3
		7.1	Radio & Advertisement	4	4	20	80	100	3
	SEC-3	8	Fundamentals of Journalism	2	2	10	40	50	2
VI	DSE-2	9	Photo Journalism & Cinema	4	4	20	80	100	3
		9.1	Television Journalism & Internet	4	4	20	80	100	3
	SEC-4	10	News writing skills	2	2	10	40	50	2
				44	46				

  
**IQAC Co-ordinator**  
 K.L.E. Society's  
 S.C.P. Arts, Science & D.D.S. Commerce College,  
 MAHALINGPUR-587312, Dist. Bagalkot.



  
**GRADE-1 PRINCIPAL**  
 K.L.E. Society's  
 S.C.P. Arts, Science & D.D.S. Commerce College  
 MAHALINGPUR-587312, Dist. Bagalkot.



**COURSE STRUCTURE OF  
UNDER GRADUATES**

**BACHELOR OF SCIENCE**

**2020-21**



# RANI CHANNAMMA UNIVERSITY

## BELAGAVI

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF SCIENCE

PHYSICS

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



**CHOICE BASED CREDIT SYSTEM [CBCS]  
B.Sc. Program with Optional Subject: PHYSICS**

B.Sc., PHYSICS Syllabus as per CBCS (With effect from the academic year 2020-21 onwards)								
Sem	Part	Paper Code	Title of the Paper	Hours/Week	Marks			Subject Credits
					IA	Exam	Total	
I	Part – 1 DSC	PHYDSCT1.1	Mechanics and Theory of Relativity	4	20	80	100	3
		PHYDSCP1.1	Practical I	3	10	40	50	1
	Total : Hours / Credits				7			150
II	Part – 1 DSC	PHYDSCT2.1	Electricity & Magnetism	4	20	80	100	3
		PHYDSCP2.1	Practical II	3	10	40	50	1
	Total : Hours / Credits				7			150

B.Sc., PHYSICS Syllabus as per CBCS (With effect from the academic year 2021-22 onwards)								
Sem	Part	Paper Code	Title of the Paper	Hours/Week	Marks			Subject Credits
					IA	Exam	Total	
III	Part – 1 DSC	PHYDSCT3.1	Thermodynamics-I, Sound and Waves	4	20	80	100	3
		PHYDSCP3.1	Practical III	3	10	40	50	1
	Part – 2 SEC	PHYSECT3.2	Weather Forecasting	2	10	40	50	2
	Total : Hours / Credits				9			200
IV	Part – 1 DSC	PHYDSCT4.1	Thermodynamics-II, Statistical Mechanics and Optics	4	20	80	100	3
		PHYDSCP4.1	Practical IV	3	10	40	50	1
	Part – 2 SEC	PHYSECT4.2	Renewable Energy sources and Energy Harvesting	2	10	40	50	2
	Total : Hours / Credits				9			200





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF SCIENCE

CHEMISTRY

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



**CHOICE BASED CREDIT SYSTEM [CBCS]  
B.Sc. Program with Optional Subject: CHEMISTRY**

(With effect from the academic year 2020-21 onwards)

Sem	Part	Paper Code	Title of the Paper	Hours / Week	Marks			Subject Credits
					IA	Exam	Total	
I	Part - 1	CHEDSCT 1.1	Chemistry-1	4	20	80	100	3
	DSC	CHEDSCP 1.1	Practicals-1	3	10	40	50	1
	Total: Hours / Credits			7			150	4
II	Part - 1	CHEDSCT 2.1	Chemistry-2	4	20	80	100	3
	DSC	CHEDSCP 2.1	Practicals-2	3	10	40	50	1
	Total: Hours / Credits			7			150	4





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF SCIENCE

MATHEMATICS

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



**CHOICE BASED CREDIT SYSTEM [CBCS]**  
**B.Sc. Program with Mathematics Optional Subject**

B.Sc.: Mathematics as one of the optional subject revised syllabus under CBCS (w.e.f. 2020-21 and onwards)								
Sem	Part	Paper Code	Title of Paper	Hours/Week	Marks			Subject Credits
					IA	Exam	Total	
I	Part – 1 DSC	MATDSCT 1.1	Algebra-I and Calculus-I	4	20	80	100	3
		MATDSCP 1.1	Practicals-I	3	10	40	50	1
	<b>Total : Hours / Credits</b>				<b>7</b>			<b>150</b>
II	Part – 1 DSC	MATDSCT 2.1	Calculus-II and 3-Dimensional Geometry	4	20	80	100	3
		MATDSCP 2.1	Practicals-II	3	10	40	50	1
	<b>Total : Hours / Credits</b>				<b>7</b>			<b>150</b>

B.Sc.: Mathematics as one of the optional subject revised syllabus under CBCS (w.e.f. 2021-22 and onwards)								
Sem	Part	Paper Code	Title of Paper	Hours/Week	Marks			Subject Credits
					IA	Exam	Total	
III	Part – 1 DSC	MATDSCT3.1	Algebra-II, Real analysis and Differential Equations	4	20	80	100	3
		MATDSCP 3.1	Practicals-III	3	10	40	50	1
	Part – 2 SEC	MATSECT 3.2	Set Theory and Theory of Equations	2	10	40	50	2
	<b>Total : Hours / Credits</b>				<b>9</b>			<b>200</b>
IV	Part – 1 DSC	MATDSCT 4.1	Vector Calculus, Infinite Series and Defereential Equations	4	20	80	100	3
		MATDSCP 4.1	Practicals-IV	3	10	40	50	1
	Part – 2 SEC	MATSECT 4.2	Fourier Transforms	2	10	40	50	2
	<b>Total : Hours / Credits</b>				<b>9</b>			<b>200</b>





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF SCIENCE

BOTANY

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)

**CHOICE BASED CREDIT SYSTEM [CBCS]  
B.Sc. Program with Optional Subject: BOTANY**





**B.Sc., BOTANY Syllabus under CBCS scheme  
(With effect from the academic year 2020-21 onwards)**

Sem	Part	Paper Code	Title of the Paper	Hours/Week	Marks			Subject Credits
					IA	Exam	Total	
I	Part – 1 DSC	BOTDSCT1.1	Biodiversity (Microbes, Algae, Fungi and Archegoniate)	4	20	80	100	3
		BOTDSCP1.1	Practical I	3	10	40	50	1
	<b>Total : Hours / Credits</b>			<b>7</b>			<b>150</b>	<b>4</b>
II	Part – 1 DSC	BOTDSCT2.1	Plant Ecology and Diversity of angiosperms	4	20	80	100	3
		BOTDSCP2.1	Practical II	3	10	40	50	1
	<b>Total : Hours / Credits</b>			<b>7</b>			<b>150</b>	<b>4</b>

**B.Sc., BOTANY Syllabus under CBCS scheme  
(With effect from the academic year 2021-22 onwards)**

Sem	Part	Paper Code	Title of the Paper	Hours/Week	Marks			Subject Credits
					IA	Exam	Total	
III	Part – 1 DSC	BOTDSCT3.1	Plant Anatomy and Embryology	4	20	80	100	3
		BOTDSCP3.1	Practical III	3	10	40	50	1
	Part – 2 SEC	BOTSECT3.2	Herbal technology	2	10	40	50	2
	<b>Total : Hours / Credits</b>			<b>9</b>			<b>200</b>	<b>6</b>
IV	Part – 1 DSC	BOTDSCT4.1	Plant Physiology and Biochemistry	4	20	80	100	3
		BOTDSCP4.1	Practical IV	3	10	40	50	1
	Part – 2 SEC	BOTSECT4.2	Nursery and Gardening	2	10	40	50	2
	<b>Total : Hours / Credits</b>			<b>9</b>			<b>200</b>	<b>6</b>





# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF SCIENCE

ZOOLOGY

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



**CHOICE BASED CREDIT SYSTEM [CBCS]  
B.Sc. Program with Optional Subject: ZOOLOGY**

(With effect from the academic year 2020-21 onwards)

Sem	Part	Paper Code	Title of the Paper	Hour s/ Week	Marks			Subject Credits
					IA	Exam	Total	
I	Part - 1	ZOODSCT 1.1	Animal discovery	4	20	80	100	3
	DSC	ZOODSCP 1.1	Practicals-1	3	10	40	50	1
	<b>Total: Hours / Credits</b>			<b>7</b>			<b>150</b>	<b>4</b>
II	Part - 1 DSC	ZOODSCT 2.1	Comparative anatomy and development biology of vertebrates	4	20	80	100	3
		ZOODSCP 2.1	Practicals-2	3	10	40	50	1
	<b>Total: Hours / Credits</b>			<b>7</b>			<b>150</b>	<b>4</b>

  
**IQAC Co-ordinator**  
K.L.E Society's  
S.C.P. Arts, Science & D.D.S Commerce College,  
MAHALINGPUR-587312, Dist. Bagalkot.



  
**GRADE-1 PRINCIPAL**  
K.L.E Society's  
S.C.P. Arts, Science & D.D.S Commerce College  
MAHALINGPUR-587312, Dist. Bagalkot.

**COURSE STRUCTURE OF UNDER  
GRADUATES**

**BACHELOR OF COMMERCE**

**2020-21**



# **RANI CHANNAMMA UNIVERSITY**

## **BELAGAVI**

THE COURSE STRUCTURE OF UNDER GRADUATE

BACHELOR OF COMMERCE

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)



## B.Com (CBCS) Course Structure

(With effect from 2020-21)

### Semester First

	Title of the paper	Marks			Teaching Hours	Total Credit
		IA Marks	End Examination Marks	Total		
Part I	1.1 – MIL	20	80	100	4	3
	1.2 –English	20	80	100	4	3
Part -II	1.3- Financial Accounting –I	20	80	100	5	4
	1.4 Market Analysis for Business Decisions	20	80	100	4	2
	1.5- Company Law and Administration	20	80	100	5	3
	1.6- Business Environment	20	80	100	4	3
Part III	1.7 Practicals on Skill Development	10	40	50	2	1
Part IV	1.8-Indian Constitution	10	40	50	4	2
	1.9 Extra co-curricular Activities	50	-	50	-	1
Total					32	22

#### Note

1. One hour of Practical Class is equal to One hour of Theory Class and the class is managed by a Single teacher. Practical classes may be conducted in the Business Lab, or in Computer Lab, or in the Class Room depending on the requirement. Senior / Experienced Teachers may be allotted the practical work load.



## Second Semester

	Paper code	Title of the paper	Marks			Teaching Hours	Total Credit
			IA Marks	End Examination Marks	Total		
Part I	AEC	2.1 – MIL	20	80	100	4	3
	AEC	2.2 –English	20	80	100	4	3
Part -II	DSC	2.3 Modern Management Techniques	20	80	100	4	3
	DSC	2.4- Financial accounting –II	20	80	100	5	4
	DSC	2.5- Modern Marketing Management	20	80	100	4	3
	DSC	2.6 –Investment Management	20	80	100	5	3
	DSC	2.7. E-Commerce and Modern Business	20	80	100	4	3
Part III	SEC	2.7 Practicals on skill Development	10	40	50	2	1
Part IV	CC/EA	2.8 Extra co curricular Activities	50	-	50	-	1
Total						32	24

### Note

- One hour of Practical Class is equal to One hour of Theory Class and the class is managed by a Single teacher. Practical classes may be conducted in the Business Lab. or in Computer Lab. or in the Class Room depending on the requirement. Senior / Experienced Teachers may be allotted the practical work load.



### Third Semester

	Paper code	Title of the paper	Marks			Teaching Hours	Total Credit
			IA Marks	End Examination Marks	Total		
Part I	AEC	3.1 - MIL	20	80	100	4	3
	AEC	3.2 -English	20	80	100	4	3
	DSC	3.3- Entrepreneurship Development	20	80	100	4	3
Part -II	DSC	3.4 Corporate Accounting-I	20	80	100	5	4
	DSC	3.5 Modern Banking	20	80	100	4	3
	DSC	3.6 Quantitative Analysis for Business Decisions -I	20	80	100	5	3
	SEC	3.7 Computerized Accounting- I	20	80	100	5	4
Part III	SEC	3.8 Practicals on skill Development	10	40	50	2	1
Part IV	CC/EA	3.9 Extra co curricular Activities	50	-	50	-	1
Total						33	25

#### Note

- One hour of Practical Class is equal to One hour of Theory Class and the class is managed by a Single teacher. Practical classes may be conducted in the Business Lab. or in Computer Lab. or in the Class Room depending on the requirement. Senior / Experienced Teachers may be allotted the practical work load.





#### Fourth Semester

	Paper code	Title of the paper	Marks			Teaching Hours	Total Credit
			IA Marks	End Examination Marks	Total		
Part I	AEC	4.1 - MIL	20	80	100	4	3
	AEC	4.2 -English	20	80	100	4	3
	DSC	4.3- Modern Business Law	20	80	100	4	3
Part -II	DSC	4.4-Financial management	20	80	100	5	3
	DSC	4.5 Corporate Accounting-II	20	80	100	5	4
	DSC	4.6 Quantitative Analysis for Business Decisions-II	20	80	100	5	3
	SEC	4.7 Computerized Accounting-II	20	80	100	5	4
Part III	SEC	4.8 Practicals on skill Development	10	40	50	2	1
Part IV	CC/EA	4.9 Extra co-curricular Activities	50	-	50	-	1
Total						34	25

#### Note

- One hour of Practical Class is equal to One hour of Theory Class and the class is managed by a Single teacher. Practical classes may be conducted in the Business Lab, or in Computer Lab, or in the Class Room depending on the requirement. Senior / Experienced Teachers may be allotted the practical work load.



### Fifth Semester

	Paper code	Title of the paper	Marks			Teaching Hours	Total Credit
			IA Marks	End Examination Marks	Total		
Part I	DSC	5.1-Management Accounting	20	80	100	5	3
	DSC	5.2 -Income tax -I	20	80	100	5	3
	DSC	5.3 -Elements of Costing	20	80	100	5	3
	DSC	5.4- Financial Reporting Standards	20	80	100	4	3
	SEC	5.5 - Enterprise Resources Planning	20	80	100	4	2
						23	14
Group -I- Finance and Taxation							
	DSC	5.6 Indian Financial Market	20	80	100	4	3
	DSC	5.7 Goods and service Tax	20	80	100	4	3
						8	6
Group- II -Insurance and Banking							
	DSC	5.6 Fundamentals of Life insurance	20	80	100	4	3
	DSC	5.7 Fundamentals of Banking-I	20	80	100	4	3
						8	6
Group- III -Marketing							
	DSC	5.8 Fundamentals of Rural Marketing	20	80	100	4	3
		5.9 Advertising and Salesmanship	20	80	100	4	3
						8	6
Group -IV - Statistics							
	DSC	5.6Advanced Business statistics -I	20	80	100	4	3
	DAC	5.7 Advanced Business Statistics-II	20	80	100	4	3
						8	6
Practical's on skill development and Extra co-curricular activities							
Part II	SEC	5.8 Community Services	10	40	50	2	1
	CC/EA	5.9 Extra co-curricular Activities	50	-	50	-	1
						2	2

#### Note

- One hour of Practical Class is equal to One hour of Theory Class and the class is managed by a Single teacher. Practical classes may be conducted in the Business Lab, or in Computer Lab, or in the Class Room depending on the requirement. Senior / Experienced Teachers may be allotted the practical work load.
- Community services students has to do two hours every week during fifth semester by selecting any community service (with in identified area preferably, the period for the said purpose should be allotted in Saturday).



### Sixth Semester

	Paper code	Title of the paper	Marks			Teaching Hours	Total Credit
			IA Marks	End Examination Marks	Total		
Part I	DSC	6.1 Modern Auditing Techniques	20	80	100	4	3
	DSC	6.2 Income tax -II	20	80	100	5	3
	DSC	6.3 Costing Methods and Techniques	20	80	100	5	3
	DSC	6.4 Modern Retail Management	20	80	100	4	3
	SEC	6.5 Business Correspondence and Reporting	20	80	100	4	3
Group -I- Finance and Taxation						22	15
	DSC	6.6 Indian Financial Services	20	80	100	4	3
	DSC	6.7 Goods and Services tax -II	20	80	100	4	3
Group- II -Insurance and Banking						8	6
	DSC	6.6 General Insurance	20	80	100	4	3
	DSC	6.7 Information Technology in Banking	20	80	100	4	3
Group- III -Marketing						8	6
	DSC	6.6 Service Marketing	20	80	100	4	3
	DSC	6.7 Consumer Behaviour and Marketing Management	20	80	100	4	3
Group -IV – Statistics						8	6
	DSC	6.6 Advanced Business statistics-III	20	80	100	4	3
	DSC	6.7 Advanced Business Statistics - IV	20	80	100	4	3
Practical's on skill development and Extra co-curricular activities						8	3
	SEC	5.8 Internship Programme	10	40	50	2	2
	CC/EA	5.9 Extra co curricular Activities	50	-	50	-	1
Total						8	3

IQAC Co-ordinator



GRADE-1 PRINCIPAL

**COURSE STRUCTURE OF  
POST GRADUATES**

**MASTER OF COMMERCES**

**2020-21**



**Rani Channamma University**  
Vidyasangama, Bhutramanahatti, Belagavi

**Master of Commerce  
(Regular)  
(With Effect from Academic Year 2020-21)**

Course Code	Semester & Course	Teaching Hours	Credits	Maximum Marks			Examination Duration Hrs
				Internal Assessment	Semester End Examination	Total	
<b>Semester - I</b>							
<b>Hard Core</b>							
HC-1.1	Corporate Strategic Management	4	4	20	80	100	3
HC-1.2	Advanced Marketing Management	4	4	20	80	100	3
HC-1.3	Financial Management	4	4	20	80	100	3
HC-1.4	Applied Economics for Business	4	4	20	80	100	3
Elective Specialisation: Students can opt anyone soft core group having two courses each							
<b>Group-(A) Accounting and Finance</b>							
SC-1.5 (AA)	Management Accounting	4	4	20	80	100	3
SC-1.6 (AF)	Stock Market Operations	4	4	20	80	100	3
<b>Group-(B) Costing and Taxation</b>							
SC-1.5 (BC)	Cost Management and Standards	4	4	20	80	100	3
SC-1.6 (BT)	Principles and Practice of Taxation	4	4	20	80	100	3
<b>Group-(C) Human Resource Management and Marketing Management</b>							
SC-1.5 (CH)	Knowledge Management	4	4	20	80	100	3
SC-1.6 (CM)	Retail and Digital Marketing	4	4	20	80	100	3
<b>Group-(D) Banking and Insurance</b>							
SC-1.5 (DB)	Indian Banking System	4	4	20	80	100	3
SC-1.6 (DI)	Fundamentals of Insurance	4	4	20	80	100	3
<b>Semester Total</b>		<b>24</b>	<b>24</b>	<b>120</b>	<b>480</b>	<b>600</b>	<b>18</b>
<b>Semester-II</b>							
HC-2.1	Business Research Methods	4	4	20	80	100	3
HC-2.2	Quantitative Techniques	4	4	20	80	100	3
HC-2.3	Corporate Restructuring	4	4	20	80	100	3
<b>Open Elective offered to other Disciplines</b>							
OEC-2.4.1	Fundamentals of Business	4	4	20	80	100	3
OEC-2.4.2	Basics of Income Tax	4	4	20	80	100	3
<b>Group-(A) Accounting and Finance</b>							
SC-2.5 (AA)	Advanced Corporate Accounting	4	4	20	80	100	3
SC-2.6 (AF)	Investment Analysis and Portfolio Management	4	4	20	80	100	3
<b>Group-(B) Costing and Taxation</b>							
SC-2.5 (BC)	Marginal Costing for Managerial Decisions	4	4	20	80	100	3
SC-2.6 (BT)	Corporate Tax Planning	4	4	20	80	100	3
<b>Group-(C) Human Resource Management and Marketing Management</b>							
SC-2.5 (CH)	Employee Relations Management	4	4	20	80	100	3
SC-2.6 (CM)	Consumer Behaviour	4	4	20	80	100	3
<b>Group-(D) Banking and Insurance</b>							
SC-2.5 (DB)	Funds Management in Banks	4	4	20	80	100	3
SC-2.6 (DI)	Management of Life Insurance	4	4	20	80	100	3
<b>Semester Total</b>		<b>28</b>	<b>24</b>	<b>120</b>	<b>480</b>	<b>600</b>	<b>18</b>



Semester-III							
HC-3.1	International Financial Management	4	4	20	80	100	3
HC-3.2	Business Analytics	4	4	20	80	100	3
HC-3.3	Organisational Behaviour	4	4	20	80	100	3
Open Elective offered to other Disciplines							
OEC-3.4.1	Fundamentals of Banking	4	4	20	80	100	3
OEC-3.4.2	Personal Financial Planning	4	4	20	80	100	3
Group-(A) Accounting and Finance							
SC-3.5 (AA)	Financial Reporting Standards	4	4	20	80	100	3
SC-3.6 (AF)	Financial Derivatives	4	4	20	80	100	3
Group-(B) Costing and Taxation							
SC-3.5 (BC)	Techniques of Costing	4	4	20	80	100	3
SC-3.6 (BT)	GST and Customs	4	4	20	80	100	3
Group-(C) Human Resource Management and Marketing Management							
SC-3.5 (CH)	Human Resource Analytics	4	4	20	80	100	3
SC-3.6 (CM)	Supply Chain Management	4	4	20	80	100	3
Group-(D) Banking and Insurance							
SC-3.5 (DB)	Bank Performance and NPA Management	4	4	20	80	100	3
SC-3.6 (DI)	General Insurance	4	4	20	80	100	3
<b>Semester Total</b>		<b>28</b>	<b>24</b>	<b>120</b>	<b>480</b>	<b>600</b>	<b>18</b>
Semester-IV							
HC-4.1	Information Technology for Business	4	4	20	80	100	3
HC-4.2	Business Ethics and Corporate Governance	4	4	20	80	100	3
HC-4.3	Dynamics of Entrepreneurial Development	4	4	20	80	100	3
HC-4.4	Project and Field Visit	4	4	20	80	100	3
Group-(A) Accounting and Finance							
SC-4.5 (AA)	Innovations in Accounting	4	4	20	80	100	3
SC-4.6 (AF)	Behavioural Finance	4	4	20	80	100	3
Group-(B) Costing and Taxation							
SC-4.5 (BC)	Strategic Cost Management	4	4	20	80	100	3
SC-4.6 (BT)	International Taxation	4	4	20	80	100	3
Group-(C) Human Resource Management and Marketing Management							
SC-4.5 (CH)	Competency Mapping and Succession Planning	4	4	20	80	100	3
SC-4.6 (CM)	Rural Marketing	4	4	20	80	100	3
Group-(D) Banking and Insurance							
SC-4.5 (DB)	International Banking	4	4	20	80	100	3
SC-4.6 (DI)	Actuarial Science	4	4	20	80	100	3
<b>Semester Total</b>		<b>24</b>	<b>24</b>	<b>120</b>	<b>480</b>	<b>600</b>	<b>18</b>
<b>Grand Total: Semester I to IV</b>		<b>104</b>	<b>96</b>	<b>480</b>	<b>1920</b>	<b>2400</b>	<b>72</b>

**Note:**

1. Hard core papers are compulsory in each semester.
2. Students have to select one soft core group out of four soft core groups, in the first semester and have to complete the M.Com programme in the same group up to fourth semester. They are not permitted to change the soft core group in between the programme.
3. Students have to opt one OEC paper each in II and III semester offered by the other departments/disciplines of the university.
4. For project work there shall be one working hour per week for six students.

IQAC Co-ordinator

K.L.E. Society's

S.C.P. Arts, Science & D.D.S. Commerce College,  
MAHALINGPUR-587312, Dist. Bagalkot.



GRADE-1 PRINCIPAL

K.L.E. Society's

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ಕೆ ಎಲ್ ಇ ಸಂಸ್ಥೆಯ

ಶ್ರೀ ಚನ್ನಗಿರಿಶ್ವರ ಪ್ರಸಾದಿಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ದಂ.ದಾ. ಶಿರೋಲ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ,



(ತಾ. ಮುಧೋಳ) ಮಹಾಲಿಂಗಪುರ - 587 312. (ಬೆ. ಬಾಗಲಕೋಟೆ)

( ಸ್ವಾತಂತ್ರ್ಯ ಪುರುಷೋತ್ತಮ 'B++2.81' CGPA )

KLE Society's

**SHRI CHANNAGIRISHWAR PRASADIK ARTS, SCIENCE AND D.D. SHIROL COMMERCE COLLEGE,**

Tq : Mudhol

**MAHALINGPUR - 587 312.**

Dist : Bagalkot

( NAAC Re-accredited 'B++' 2.81 CGPA )

ಉಲ್ಲೇಖ ಸಂಖ್ಯೆ : ೨೩ / \_\_\_\_\_ / \_\_\_\_\_

ದಿನಾಂಕ : \_\_\_\_\_

**List of Courses offered by the Institution across all programs during  
the year 2016-17 To 2019-20**

Sl. No	Program Name	Course Name
1	Bachelor of Arts - English	English Literature (Elizabethan Age & Puritan Age: 1553-1660) Introduction to Literature, Literary Terms and Forms and Representative Text
2		English Literature (Restoration Age, Age of Pope and Age of Dr. Johnson 1660-1798) Introduction to Literature, Literary Terms and Forms and Representative Text
3		English Literature (Romantic and Victorian Age: 1798-1900) and Representative Text
4		English Literature (20th Century) and Representative Text
5		Literary Criticism
6		Indian English Literature, Translation Studies and Representative Text
7		Study of English Language and English Phonetics
8		Study of Classics and Modern Literary Theories
9		History of Kannada Literature
10	Bachelor of Arts - Kannada	Modern History of Kannada Literature
11		Poetics (Indian & Western)
12		Nalpadagalu
13		Folk Literature Art
14		Kannada women Literature - Mahila Sanvadane
15		Cultural History of Kannada Region
16		Study of Sources of Kannada Literature
17		Bachelor of Arts - Economics
18	Micro Economics II	
19	Monetary Economics	
20	International Economics	
21	Macro Economics	
22	Economics of Development	
23	Public Finance and Fiscal Policy	
24	Indian Economy	
25	Bachelor of Arts-	Micro Economics - Paper I





26	Agricultural Marketing	Micro Economics - Paper II
27		Principles of Agricultural Marketing
28		Value Chain in Agricultural Marketing
29		Commodity Marketing and Future Trading
30		Agricultural Economics
31		Agricultural Marketing, Legislation and Policies
32		Indian Economy
33	Bachelor of Arts - History	History and Culture of Karnataka
34		History & Culture of Karnataka ( 1336 to 1956)
35		History and culture of ancient India from early times to Cholas
36		History of India from Md Ghazani to Shivaji
37		History of Modern India (1707 AD to 1905 AD)
38		Modern Europe (From 1450 AD to 1914 AD)
39		History of Modern India (1707 to 1857)
40	Modern Europe (1914 AD to 1990 AD)	
41	Bachelor of Arts - Sociology	Introduction to Sociology
42		Social Change and Social Control
43		Study of Indian Social thought
44		Study of Western Sociological thought
45		Study of Indian Society - Paper -I
46		Rural Development in India - Paper - II
47		Social Problems in India - Paper - I
48	Urban Society in India - Paper - II	
49	Bachelor of Arts - Political Science	Political Theory
50		Political Thinkers
51		Indian Government and Politics
52		Karnataka Government & Politics
53		Public Administration
54		Modern Governments
55		International Relations
56	Political Processes & Institutions in India	
57	Bachelor of Arts - Journalism & Mass Communication	Basic Journalism
58		Fundamentals of Communication
59		Reporting
60		Editing and Production
61		Photography and Cinema
62		Radio Journalism
63		Television Journalism
64	Computer Application in Media	
65	Bachelor of Science - Physics	Mechanics & Properties Of Matter
66		Sound & Thermal Physics
67		Geometrical Optics & Electricity I

108		Genetics, Biotechnology and Biostatistics
109		Applied Zoology
110		Microbiology, Nanotechnology, Bioinformatics, Methods in Biology
111	Bachelor of Commerce	Financial Accounting - I
112		Business Economics - I
113		Business Environment - I
114		Secretarial Practice
115		Financial Accounting - II
116		Business Economics - II
117		Marketing Management
118		Accounting Theory
119		Computer Application in Business - I
120		Retailing Management
121		Principles Of Entrepreneurship Development
122		Corporate Accounting - I
123		Banking Law And Practice
124		Business Statistics
125		Industrial Economics
126		Computer Application In Business - II
127		Financial Management
128		Modern Business Law
129		Corporate Accounting - II
130		Business Communication
131		Business Statistics - II
132		International Business Economics
133		Computer Application In Business - III
134		Management Accounting
135		Income Tax - I
136		Elements of Costing-I
137		Small Business & Economic Development
138		Computer Application -IV
139		Indian Financial Markets-I
140		Goods and Service Tax-I
141	Modern Auditing and Practices	
142	Income Tax - II	
143	Costing Methods & Techniques - II	
144	Indian Economics	
145	Computer Application in Business - V	
146	Indian Financial Services	
147	Goods and Service Tax-II	

  
**IQAC Co-ordinator**  
 K.L.E. Society's  
 S.C.P. Arts, Science & D.D.S. Commerce College  
 MAHALINGPUR-587312, Dist. Bagalkot.



  
**GRADE-1 PRINCIPAL**  
 K.L.E. Society's  
 S.C.P. Arts, Science & D.D.S. Commerce College,  
 MAHALINGPUR-587312, Dist. Bagalkot.

**Course Structure and Syllabus  
of Under Graduates**

**Bachelor of Arts  
2016-17 and onwards**



# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**WEL-COME**

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.A**

**I Semester**

**w.e.f.**

**Academic Year 2016-17 and onwards**



Q.3. Essay /Critical question on the text Musaddas-e-Hali	1 * 12 =12
Q.4. Appericiation of Band (Verses) from Musaddas (2 out of 4)	2 * 6 =12
Q.5. Essay /critical type question with choice on the form/ Art & style of the Novelist	1 * 12 =12
Q.6. Essay/critical type question on the novel	1 * 12 =12
Q.7. Short Note on character ( Novel)	2 * 5 = 10

## 7. English (Optional)

### Detailed Syllabus for BA

(With effect from 2016-17 onwards)

### Semester – I: Optional English

English Literature (Elizabethan Age & Puritan Age: 1553-1660)

Introduction to Literature, Literary Terms and Forms and Representative Text

Teaching Hours: 5 per week

#### Section – A: History of English Literature (30 Marks)

1. The Renaissance and its Features
2. Elizabethan Poetry
3. Elizabethan Drama
4. Metaphysical Poetry
5. Cavalier Poets
6. Puritan Prose

#### Section – B: Representative Text: Bacon's Essays (20 Marks)

Only the following essays are to be taught

1. Of Truth
2. Of Revenge
3. Of Marriage and Single Life
4. Of Friendship
5. Of Studies
6. Of Love

#### Section – C: 30 Marks

1. Introduction to the Study of Literature
  - i. What is Art?
  - ii. What is Literature?
  - iii. Literature and Society
2. Study of Literary Terms  
Simile, Metaphor, Parable, Allegory, Conceit, Antithesis, Irony,  
Blank Verse, Parody, Onomatopoeia
3. Study of Literary Forms  
Poetry: Lyric, Sonnet, Ballad, Elegy, Ode, Epic



### 3. Kannada (Optional)

ಬಿ ಎ. ಐಚ್ಛಿಕ ಕನ್ನಡ ವಿಷಯದ ಪಠ್ಯಕ್ರಮ

ಬಿ ಎ ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್ ಐಚ್ಛಿಕ ಕನ್ನಡ

೧. ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯನ್ನು ಸ್ವಲ್ಪವಾಗಿ ಪರಿಚಯಿಸುವುದು ಮತ್ತು ಪಟ್ಟಿ ಪ್ರಕಾರದ ಒಂದು ಭಾಗವನ್ನು ಹಾಗೂ ಆ ಪ್ರಕಾರದ ಸ್ವರೂಪ ಮತ್ತು ಬೆಳವಣಿಗೆಯನ್ನು ಕುರಿತು ವಿವೇಚನಾತ್ಮಕ ಅಭ್ಯಯನಿಸುವುದು.
೨. ಈ ಪಟ್ಟಿಗೆ ಒಟ್ಟು ಪಾಠದ ಅವಧಿ ೮೦ ಗಂಟೆಗಳಾಗಿರುತ್ತದೆ. ವಾರಕ್ಕೆ ೦೫ ಗಂಟೆಗಳ ಬೋಧನೆಯನ್ನು ನಿಗದಿಪಡಿಸಲಾಗಿದೆ. ಒಟ್ಟು ಅಂಕಗಳು ೧೦೦ ಅಂತಹ ಗುಣಾಂಕಕ್ಕೆ ೨೦ ಅಂಕಗಳು (ಹಾಗಾದಾಗ ೦೪, ಮೊದಲ ಕೆಲವು ಪರೀಕ್ಷೆಗೆ ೦೬, ಎರಡನೆಯ ಕೆಲವು ಪರೀಕ್ಷೆಗೆ ೦೬, ನಿಯೋಜಿತ ಕಾರ್ಯಕ್ಕೆ ೦೪ ಅಂಕಗಳು) ಹಾಗೂ ಉಳಿದ ಪರೀಕ್ಷೆಗೆ ೮೦ ಅಂಕಗಳು.

#### ಪಠ್ಯಕ್ರಮ

೧. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ - (೬೦ ಅಂಕಗಳು) ೬೦ ಗಂಟೆಗಳ ಪಾಠ
- ಎ. ಕನ್ನಡದ ಪ್ರಾಚೀನತೆ ಕುರಿತು ಒಳನೋಟಗಳು (ಹತ್ತು ಅಂಕಗಳು)
- ಬಿ. ಪ್ರಾಚೀನ ಮಧ್ಯಕಾಲೀನ ಹಾಗೂ ಆಧುನಿಕ ಕಾಲದ ಸಾಹಿತ್ಯದ ಪ್ರಕಾರಗಳ ಸ್ವರೂಪ, ಪ್ರೇರಣೆ, ಧೋರಣೆಗಳು. (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)
೨. ಪ್ರಮುಖ ಕವಿಗಳ ಕೃತಿ, ಪ್ರಕಾರಗಳನ್ನು ಸ್ವಲ್ಪವಾಗಿ ಪರಿಚಯಿಸುವುದು. ಪಂಪ, ರನ್ನ, ನಾಗವಂಶ, ನಯನೀನ, ಮಗಳೂರು, ಬನ್ನ, ಅಂದಯ್ಯ, ಬಸವಣ್ಣ, ಅಲ್ಲಮ, ಅಕ್ಕಮಹಾದೇವಿ, ವಾಸುದೇಯ, ಆಯ್ದಕ್ಕಿ ಲಕ್ಕಪ್ಪ, ವಿದ್ಯರಾಜು, ಪರಿಪದ, ರಾಘವಾಚಾರ್ಯ, ದತ್ತಾತ್ರೇಯ, ಸರ್ವಜ್ಞ, ಪುರಂದರದಾಸರು, ಕನಕದಾಸರು, ನಿಜಗುಣ ತಿಮ್ಮಯೋಗಿಗಳು, ಪದ್ಮಕವಿ, ತಿರುನಾಳ ಪಂಡಿತ ಹಾಗೂ ಮುದ್ದಾಳ (ಇಂಪತ್ತು ಅಂಕಗಳು)
೩. ಪ್ರಬಂಧಗ್ರಂಥ - (೨೦ ಅಂಕಗಳು) (೨೦ ಗಂಟೆಗಳ ಪಾಠ)
- ಎ. ಮಧ್ಯಕಾಲೀನದ ಲಾಠಿ ಮುತ್ತ (ಹತ್ತು ಅಂಕಗಳು)
- ಬಿ. ಪಟ್ಟಿ ಕಾವ್ಯ ಪ್ರಕಾರದ ಸ್ವರೂಪ ಮತ್ತು ಬೆಳವಣಿಗೆ (ಹತ್ತು ಅಂಕಗಳು)

#### ಪರಮಾತ್ಮನ ಗ್ರಂಥಗಳು

೧. ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ರಂ. ಪ್ರೀ. ಮುಗಲ್
೨. ಸಾಹಿತ್ಯ ಸಂಗ್ರಹ : ಕೀರ್ತಿಸಾಧ ಐತರಸೋಪ
೩. ಶ್ರೀನಾಮಾವಳಿಗೆ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು



### 3. Economics of Rural Development (Optional)

Syllabus for B.A.  
Semester - I  
Optional Economics of Rural Development

**Teaching Hours : 5 Hours per week**

**Subject: MICRO ECONOMICS - PAPER I**

**Objectives:**

1. To popularize basic concepts of Economics.
2. To teach fundamental theories of Economics.
3. To provide practical knowledge about demand & supply.

**Unit - 1: Introduction to Micro Economics**

Nature & definition of Economics.

Micro and macro Economics - Meaning, Uses & Limitations.

Meaning of Static & Dynamic Economics

**Unit - 2: Utility Analysis**

Concept of Utility: Law of Diminishing Marginal Utility,

Law of Substitution and Consumer's Surplus.

Meaning and properties of indifference Curve.

**Unit - 3: Theory of Consumer Behavior.**

Meaning of Demand & its determinants: Law of Demand,

Extension & Contraction of Demand.

Increase & Decrease in Demand.

**Unit -4: Elasticity of Demand**

Meaning & types of Elasticity of Demand (Price,

Income and Cross Elasticity of Demand)

Measurement of Price E.D. Factors determining

Elasticity of Demand.

Demand forecasting and Estimation.



### Unit - 5 : Theory of Supply

Meaning & Determinants of Supply. Law of Supply.

Elasticity of Supply : Meaning & types.

Role of salesmanship and advertisement in promoting Supply.

#### Reference Books :

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1. Principles of Economics        | M. L. Seth.                     |
| 2. Principles of Economics        | K. K. Dewett.                   |
| 3. A Text book of Economic Theory | A. W. Stonier and Hague         |
| 4. A Text book of Economics       | P.A. Samuelson and Nogardus     |
| 5. Micro Economic Theory          | M. L. Jingan                    |
| 6. Modern Economics               | K.K. Dewett and K.P.M. Sundaram |
| 7. Micro Economics                | P. N. Chopra                    |
| 8. Economic Theory                | Kulkarni and Kalkundrikar       |

#### Allotment of Teaching Hrs

Total Teaching Hrs	:	50 hrs
Two Internal Tests	:	02 Hrs
Group Discussion and Case Studies	:	04 Hrs
Seminar, Field Works and Home assignments	:	04 Hrs
<b>Total</b>	<b>:</b>	<b>60 Hrs</b>

#### Allotment of Marks

A) Theory Examination	-	80 Marks
B) Internal Assessment including attendance	-	20 marks
<b>Total marks</b>	-	<b>100 marks</b>





#### 4. Economics (Optional)

Syllabus for B.A.  
Semester - I  
Optional Economics

Teaching Hours : 5 Hours per week

Subject: MICRO ECONOMICS - PAPER I

**Objectives :**

1. To Popularize basic concepts of Economics.
2. To teach fundamental theories of Economics.
3. To provide practical knowledge about demand & supply.

**Unit - I: Introduction to Micro Economics**

Nature & definition of Economics.  
Micro and Macro Economics - Meaning, Uses & Limitations.  
Meaning of Static & Dynamic Economics

**Unit - 2: Utility Analysis**

Concept of Utility; Law of Diminishing Marginal Utility.  
Law of Substitution and Consumer's Surplus.  
Meaning and properties of Indifference Curve.

**Unit - 3: Theory of Consumer Behavior.**

Meaning of Demand & its determinants; Law of Demand  
Extension & Contraction of Demand.  
Increase & Decrease in Demand.

**Unit -4: Elasticity of Demand**

Meaning & types of Elasticity of Demand (Price,  
Income and Cross Elasticity of Demand)  
Measurement of Price E.D. Factors determining of Demand.  
Demand forecasting and estimation.

**Unit -5: Theory of Supply**

Meaning & Determinants of Supply; Law of Supply;  
Elasticity of Supply : Meaning & types.  
Role of salesmanship and advertisement in promoting Supply.



# GROUP- D

## 1. Agricultural Marketing (Optional)

Syllabus for B.A.

Semester - I

Optional Agricultural Marketing

**Subject: MICRO ECONOMICS - PAPER I**

**(Teaching Hrs. 5 per week)**

**Objectives:**

1. To popularize basic concepts of Economics.
2. To teach fundamental theories of Economics.
3. To provide practical knowledge about demand & supply.

**Unit - 1: Introduction to Micro Economics**

Nature & definition of Economics.

Micro and macro Economics – Meaning, Uses & Limitations.

Meaning of Static & Dynamic Economics.

**Unit - 2: Utility Analysis**

Concept of Utility: Law of Diminishing Marginal Utility.

Law of Substitution and Consumer's Surplus.

Meaning and properties of Indifference Curve.

**Unit - 3: Theory of Consumer Behavior.**

Meaning of Demand & its determinants. Law of Demand.

Extension & Contraction of Demand.

Increase & Decrease in Demand.

**Unit - 4: Elasticity of Demand**

Meaning & types of Elasticity of Demand (Price,

Income and Cross Elasticity of Demand)

Measurement of Price E.D. Factors determining

Elasticity of Demand.

Demand forecasting and estimation.

**Unit - 5: Theory of Supply**

Meaning & Determinants of Supply. Law of Supply.

Elasticity of Supply: Meaning & types.

Role of salesmanship and advertisement in promoting Supply.



5) ಈಗಿನ ಕರ್ನಾಟಕ ಬೆಳಕಿನ ಮುಖ್ಯ ಸಂಕೀರ್ಣಕಾರರ ಪಟ್ಟಿಯನ್ನು ಕೆಳಕಂಡಂತೆ ಪರಿಶೀಲಿಸಿ.

- ಪ್ರೊ. ಮಂಜುನಾಥ ಶರಣ
- ಪ್ರೊ. ಅಶ್ವತ್ಥ ಭಟ್ಟ
- ಪ್ರೊ. ಅನಂತರಾಜ್ ಮಲ್ಲ

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## GROUP – E

### 1. History (Optional)

#### B.A.I Semester

Details of UG Syllabus

2017-2018 Onwards

History and Archaeology ( Optional)

SL NO	YEAR	Sem	TITLE OF THE PAPER	CODE NO	TEACHING HOURS	MARKS METHODS	BOOK REFERANCE
01	2017-18	I	History and Culture of Karnataka (Early times to 1336 AD)		80	80 Theory 20 I.A.	ENCLOSED
		II	History and Culture of Karnataka (1336 to 1956)		80	80 Theory 20 I.A.	ENCLOSED

Public Administration	80 Marks	5 hrs per week
Paper II Elective Paper-1	80 Marks	5 hrs per week
Modern Governments (United Kingdom & Switzerland)		
or		
Indian Administration	80 Marks	5 hrs per week
Semester VI Compulsory paper-		
International Relations	80 Marks	5 hrs per week
Paper II Elective Papers		
Political Process & Institutions in India	80 Marks	5 hrs per week
or		
Indian Foreign Policy	80 Marks	5 hrs per week

## Political Science Optional

### B.A. Semester – I

#### Political Theory

80 Marks 5 hrs per week

**Course Rationale:**

*This is an introductory paper trying to expose students to some basic ideas and concepts in Political Science. Effort has been made to orient students to the methodological and ideological traditions in political science.*

Chapter- 1: Political Theory 10 hours

1) Meaning Nature, Scope and Importance of Political Theory

2) Approaches to Political Theory :- Normative, Historical &

Empirical

Chapter-2: State 10 hours

Meaning and Elements

Theories of the Origin of the State- Divine origin theory, Social contract theory, Historical Theory, Nation and Civil Society.

Chapter-3: Sovereignty 10 hours

Meaning and perspectives of Sovereignty, Austins Theory, Pluralist Theory, Sovereignty in the age of Globalisation.

Chapter-4: Basic Concepts 12 hours



#### 4. Sociology (Optional)

<b>EXAMINATION PATTERN</b>
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### **B. A. SOCIOLOGY SYLLABUS**

CHOICE BASED CREDIT SYSTEM (CBCS)

<b>FIRST SEMESTER</b>	
<b>INTRODUCTION TO SOCIOLOGY</b>	
Unit- I	Introduction to Sociology
Unit- II	Basic Sociological Concepts
Unit- III	Dynamics in Sociology
Unit- IV	Social Interaction and Social Processes
Unit- V	Research Methods and Analyses



### Books for Reference.

1. History of Karnataka : Desai P.B
2. Karnataka through the Ages : R.R Diwakar and others
3. History of South India : K.A. Nilakantha Shastri.
4. Early History of Deccan : Yazdani, F.
5. History and Cultural of Karnataka : Basavaraj, K.R.
6. Concise History of Karnataka : Suryanath Kamath
7. History of Karnataka : H. V. Shreenivasamurthy.
8. Karnatakada Itihasa : Suryanath kamath
9. Karnatakada Itihasa : K. Sadashiva
10. ಕರ್ನಾಟಕದ ಇತಿಹಾಸ : ಸೂರ್ಯನಾಥ ಕಾಮತ್

## 2. Journalism & Mass Communication

Syllabus for B.A.  
Semester - 1

Optional Journalism and Mass Communication

### paper: 1 Basic Journalism

Teaching : Theory 5 hours per week Total 60 hrs.

Examination: Theory – 80 marks 20 IA

1. Meaning, nature and scope of journalism, Functions of journalism-Press and democracy-Role of press in moulding public opinion-Theories of Press. (12)hrs
2. Journalism as a profession-Need for training-Role and responsibilities of journalists- Ethical aspects of journalistic profession.
3. Growth of journalism in India –Journalistic career of James Augustus, Hicky, James Silk Buckingham and Rajaram Mohan Roy-Role of press during freedom struggle-Publications of Mahatma Gandhi and Jawaharlal Nehru. (12) hrs
4. Indian press after independence –Reports of first and second press commissions- Current status of Indian press, (12) hrs
5. Leading personalities of Kannada journalism: Venkatakrishiah, Mohary DVG, T.T. Sharma TSR, Patil Puttappa – Leading Kannada publications, Samyukta Karnataka, Prajavani, Vijay Karnatak, Kannada Prabha and Udayavani-Subha, Taranga and Kasturi. (12)hrs



## B.A Second Semester

### 7. English (Optional)

Detailed Syllabus for BA  
(With effect from 2016-17 onwards)  
Semester – II: Optional English

English Literature (Restoration Age, Age of Pope and Age of Dr. Johnson  
1660-1798) Introduction to Literature, Literary Terms and Forms and  
Representative Text  
Teaching Hours: 5 per week

#### Section – A: History of English Literature (30 Marks)

1. Features of Restoration Literature.
2. Restoration Poetry
3. Restoration Comedy
4. Neo-classical Poetry
5. Periodical Essay
6. 18<sup>th</sup> Century Novel
7. Sentimental Comedy

#### Section – B: Rape of the Lock – Alexander Pope (20 Marks)

#### Section – C: 30 Marks

1. Introduction to the Study of Literature
  - i. Literature and Science
  - ii. Literature and Morality
  - iii. Literature and Culture
2. Study of Literary Terms  
Fable, Pun, Hyperbole, Climax, Anti-climax, Alliteration, Personification,  
Catharsis, Allusion, Heroic-Couplet
3. The Study of Literary Forms  
Prose and Drama: Essay, Novel, Short Story, Biography, Comedy, Tragedy

#### Reference Books

1. R. D. Trivedi, *A Compendious History of English Literature*
2. Edward Albert, *History of English Literature*
3. David Daiches, *History of English Literature*
4. M. H. Abrams, *A Glossary of Literary Terms*
5. M. H. Abrams and Geoffrey Galt Harpham, *A Hand Book of Literary Terms*
6. B. Prasad, *Introduction to English Literature* 4



11.P.U.C-I Year Mathematics - Bosco S.S.

12.P.U.C-I Year Mathematics - P.G. Umarani & Umarani

13.Black. J & Bradley J.F. (1973), Essential Mathematics for Economics

### 3. Kannada (Optional)

#### ಬಿ ಎ. ಎರಡನೆಯ ಸೆಮಿಸ್ಟರ್ ಐಚ್ಛಿಕ ಕನ್ನಡ

೧. ಎರಡನೆಯ ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯನ್ನು ಸ್ಥೂಲವಾಗಿ ಪರಿಚಯಿಸುವುದು ಮತ್ತು ನಾಟಕವೊಂದನ್ನು ಹಾಗೂ ನಾಟಕ ಪ್ರಕಾರದ ಸ್ವರೂಪ ಹುಟ್ಟು ಬೆಳವಣಿಗೆಯನ್ನು ಕುರಿತು ವಿಶೇಷವಾಗಿ ಅಧ್ಯಯನಿಸುವುದು.
೨. ಈ ಪತ್ರಿಕೆಗೆ ಒಟ್ಟು ಪಾಠದ ಅವಧಿ ೮೦ ಗಂಟೆಗಳಾಗಿರುತ್ತದೆ. ಪಾಠಕ್ಕೆ ೦೫ ಗಂಟೆಗಳ ಬೋಧನೆಯನ್ನು ನಿಗದಿಪಡಿಸಲಾಗಿದೆ. ಒಟ್ಟು ಅಂಕಗಳು ೧೦೦ ಆಂತರಿಕ ಗುಣಾಂಕಕ್ಕೆ ೨೦ ಅಂಕಗಳು (ಹಾಜರಾತಿಗೆ ೦೫, ಮೊದಲ ಕಿರು ಪರೀಕ್ಷೆಗೆ ೦೪, ಎರಡನೆಯ ಕಿರು ಪರೀಕ್ಷೆಗೆ ೧೦, ನಿಯೋಜಿತ ಕಾರ್ಯಕ್ಕೆ ೦೫ ಅಂಕಗಳು) ಹಾಗೂ ತ್ರಿಯಂ ಪರೀಕ್ಷೆಗೆ ೮೦ ಅಂಕಗಳು.

#### ಪಠ್ಯಕ್ರಮ

೧. ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ - (೬೦ ಅಂಕಗಳು) ೬೦ ಗಂಟೆಗಳ ಪಾಠ
  - ಎ. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಆಧುನಿಕ ರೂಪ-ಲಕ್ಷಣಗಳ ಕುರಿತು ವಿಳಂಬಗಳು (ಹತ್ತು ಅಂಕಗಳು)
  - ಬಿ. ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಕಾರಗಳ ಸ್ವರೂಪ, ಪ್ರೇರಣೆ, ಚಳುವಳಿ (ನವೋದಯ, ಪ್ರಗತಿಶೀಲ, ನವ್ಯ, ದಲಿತ-ಬಂಡಾಯ, ಮಹಿಳಾ) ಧೋರಣೆಗಳು (ಇನ್ನೂ ಅಂಕಗಳು)
  - ಸಿ. ಪ್ರಮುಖ ಕವಿಗಳ ಕೃತಿ, ಪ್ರಕಾರಗಳನ್ನು ಸ್ಥೂಲವಾಗಿ ಪರಿಚಯಿಸುವುದು. ನವೋದಯ - ಬಿ.ಎಂ.ಶ್ರೀ, ಗೋವಿಂದ ಪೈ, ಡಿ ವಿ ಗುಂಡಪ್ಪ, ಕುವೆಂಪು, ಬೇಂದ್ರೆ, ಮತಿನ, ಮಾಸ್ತಿ, ಕಾವ್ಯಾನಂದ, ಅನಂದ ಕಂದ, ಚನ್ನವೀರ ಕಾವಿ, ಪ್ರಗತಿಶೀಲ - ಬಸವರಾಜ ಕಟ್ಟಿಮನಿ, ನಿರಂಜನ, ಸು ರಂ ಎಕ್ಕಂದಿ, ನವ್ಯ - ಗೋಕಾಕ, ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ, ಕಂಬಾರ, ಲಂಕೇಶ, ತೇಜಸ್ವಿ, ದಲಿತ -ಬಂಡಾಯ- ಬೇವನೂರು ಮಹಾದೇವ, ಬರಗೂರು ರಾಮಚಂದ್ರಪ್ಪ, ಚಂಪಾ, ಕುಂದಿ, ಸಿದ್ದಲಿಂಗಯ್ಯ, ಮಹಿಳಾ ಸಾಹಿತ್ಯ - ಸಾಲಾ ಅಬ್ದುಲಕರ, ವೈವೇಕಿ, ಸೇವಿಚಂದ್ರ (ಮೂವತ್ತು ಅಂಕಗಳು)
೨. ಶೂದ್ರ ತಪಸ್ವಿ : ಕುವೆಂಪು - (೨೦ ಅಂಕಗಳು) (೨೦ಗಂಟೆಗಳ ಪಾಠ)
  - ಎ. ಶೂದ್ರ ತಪಸ್ವಿ ನಾಟಕ (ಹತ್ತು ಅಂಕಗಳು)
  - ಬಿ.ಕನ್ನಡದಲ್ಲಿ ನಾಟಕ ಪ್ರಕಾರದ ಸ್ವರೂಪ ಹುಟ್ಟು ಬೆಳವಣಿಗೆ (ಹತ್ತು ಅಂಕಗಳು)

#### ಪರಮಾರ್ಥಕ ಗ್ರಂಥಗಳು

೧. ಹೊಸಗನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ಎಲ್ ಎಸ್ ಶೇಷಗಿರಿರಾವ್
೨. ನೂರು ಮರ ನೂರು ಸ್ತರ : ಕೀರ್ತಿನಾಥ ಕುರ್ತಕೋಟಿ





೩. ಆಧುನಿಕ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ : ಎಲ್ ಎಸ್ ಶೇಷಗಿರಿರಾವ್

ಪಿ. ಎ. ಎ. ರವರವರವರು ಸಿಬಿಇಲ್  
 ಕನ್ನಡ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ  
 ಮಾದರಿ ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ ಮತ್ತು ಅಂಶಗಳ ವಿವರ

ಅವಧಿ : ೩ ಗಂಟೆ

ಅಂಕಗಳು : ೧೦೦

ಭಾಗ - ೧  
 ಎ - ವಿಭಾಗ

ಪ್ರಶ್ನೆ - ೧ ಕನ್ನಡದ ಆಧುನಿಕ ಚರಿತ್ರೆಗಳನ್ನು ಕುರಿತು ಒಂದು ಪ್ರಬಂಧ ರಚಿಸಿ  
 (ಎರಡು ಪ್ರಶ್ನೆ ಕೆಳ ಒಂದಕ್ಕೆ ಉತ್ತರ ಪಡೆಯಲು ಹೇಳುವುದು) -೧೦

ಬಿ - ವಿಭಾಗ

ಪ್ರಶ್ನೆ - ೨ (ಅ) ಆಧುನಿಕ ಸಾಹಿತ್ಯದ ಪ್ರಕಾರಗಳ ಸ್ವರೂಪ, ಪ್ರಾಂಶು, ಭೇದಗಳ ಕುರಿತು  
 ಒಂದು ಪ್ರಬಂಧ ರಚಿಸಿ  
 (ಎರಡು ಪ್ರಶ್ನೆ ಕೆಳ ಒಂದಕ್ಕೆ ಉತ್ತರ ಪಡೆಯಲು ಹೇಳುವುದು) -೧೦

(ಆ) ಬೇಕಾದ ಒಂದಕ್ಕೆ ಬಿನ್ನಾರೆ ಪಡೆಯಲು  
 (ಎರಡು ಬಿನ್ನಾರೆ ಕೆಲವು ಒಂದಕ್ಕೆ ಉತ್ತರಿಸಲು ಹೇಳುವುದು) -೧೫

ಸಿ - ವಿಭಾಗ

ಪ್ರಶ್ನೆ - ೩ (ಅ) ಪ್ರಮುಖ ಕವಿ, ಕೃತಿ, ಪ್ರಕಾರಗಳ ಸಂಪರ್ಕಿಸುವಿಕೆ ಒಂದು ಪ್ರಬಂಧ ರಚಿಸಿ  
 (ಎರಡು ಪ್ರಶ್ನೆ ಕೆಳ ಒಂದಕ್ಕೆ ಉತ್ತರ ಪಡೆಯಲು ಹೇಳುವುದು) -೧೦

(ಆ) ಬೇಕಾದ ಒಂದಕ್ಕೆ ಬಿನ್ನಾರೆ ಪಡೆಯುವುದು  
 (ಆರು ಬಿನ್ನಾರೆ ಕೆಲವು ಒಂದಕ್ಕೆ ಉತ್ತರಿಸಲು ಹೇಳುವುದು) -೧೫

ಭಾಗ - ೨

ಪ್ರಶ್ನೆ - ೪ (ಅ) ಕನ್ನಡದ ಸಾಹಿತ್ಯದ ಪ್ರಕಾರಕ್ಕೆ ಸಂಬಂಧಿಸಿ ಒಂದು ಪ್ರಬಂಧ ರಚಿಸಿ  
 (ಎರಡು ಪ್ರಶ್ನೆ ಕೆಳ ಒಂದಕ್ಕೆ ಉತ್ತರ ಪಡೆಯಲು ಹೇಳುವುದು) -೧೦

(ಆ) ಬೇಕಾದ ಒಂದಕ್ಕೆ ಬಿನ್ನಾರೆ ಪಡೆಯುವುದು  
 (ಎರಡು ಬಿನ್ನಾರೆ ಕೆಲವು ಒಂದಕ್ಕೆ ಉತ್ತರಿಸಲು ಹೇಳುವುದು) -೧೫

ಪ್ರಶ್ನೆ - ೫ ಒಂದೇ ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಲು ಹೇಳುವುದು  
 (ಅ) ಮತ್ತು (ಆ) ವಿಭಾಗದಿಂದ ತಲಾ ಒಂದು ತಾಳೂ ಭಾಗ ೨ ಮತ್ತು ೩ನೇ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳುವುದು) -೧೫



## B.A Second Semester

### 4. Economics (Optional)

**Subject: MICRO ECONOMICS - PAPER II**  
**(Teaching Hrs. 5 per week)**

**Objectives:**

1. To popularize cost & revenue concepts.
2. To know how prices are determined.
3. To educate about distribution of income.

**Unit - 1 : Cost and Revenue Analysis.**

Meaning & types of Cost of production and Revenue.  
Short run & Long run Cost and Revenue curves.  
Production Function, Law of variable proportions.  
Role of innovations in promoting production.

**Unit - 2 : Market**

Meaning and Classification of Market.  
Meaning of Firm & Industry.  
Equilibrium of Firm & Industry : Short run & Long run.  
Role of Entrepreneur in promoting marketing.  
Meaning and features of Perfect Competition.

**Unit - 3 : Monopoly**

Meaning and features of Monopoly Market. Price and output determination in short run & long run under Monopoly. Price discrimination. Meaning & types.  
Evils & Control of Monopoly.  
Meaning and feature of Oligopoly.

**Unit - 4 : Monopolistic Competition**

Meaning and features of Monopolistic Competition.  
Price and output determination in short run and in long run under Monopolistic Competition.  
Skimming & Penetration price policy.

**Unit - 5 : Factor Pricing**

Meaning of distribution. Marginal Productivity theory of distribution.



- theory of
- a) Rent : Meaning & Concepts of Rent, Ricardian theory & Modern rent - Quasi rent.
  - b) Wages : Meaning & Concepts of Wages, Subsistence theory, Nominal & real Wages, Wage differentials, Minimum Wages.
  - c) Interest : Net & Gross Interest, Liquidity Preference theory of interest.
  - d) Profit : Meaning & Concepts of Profit, Risk & Uncertainty theory, Innovation theory.

#### Reference Books:

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1. Principles of Economics        | M. L. Seth.                     |
| 2. Principles of Economics        | K. K. Dewett.                   |
| 3. A Text book of Economic Theory | A. W. Stonier and Hague         |
| 4. A Text book of Economics       | P.A. Samuelson and Nøgaardus    |
| 5. Micro Economic Theory          | M. L. Jingan                    |
| 6. Modern Economics               | K.K. Dewett and K.P.M. Sundaram |
| 7. Micro Economics                | P. N. Chopra                    |
| 8. Economic Theory                | Kulkarni and Kalkundrikar       |

#### Allotment of Teaching Hrs

Total Teaching Hrs	:	50 hrs
Two internal Tests	:	02 Hrs
Group Discussion and Case Studies	:	04 Hrs
Seminar, Field Works and Home assignments	:	04 Hrs
<b>Total</b>	:	<b>60 Hrs</b>

#### Allotment of Marks

A) Theory Examination	-	80 Marks
B) Internal Assessment including attendance	-	20 marks
<b>Total marks</b>	-	<b>100 marks</b>



# GROUP- D

## B.A Second Semester

### 1. Agricultural Marketing (Optional)

**Subject: MICRO ECONOMICS - PAPER II**  
**(Teaching Hrs. 5 per week)**

**Objectives :**

1. To popularize cost & revenue concepts.
2. To know how prices are determined.
3. To educate about distribution of income.

**Unit - 1 : Cost and Revenue Analysis.**

Meaning & types of Cost of production and Revenue.  
Short run & Long run Cost and Revenue curves.  
Production Function, Law of variable proportions,  
Role of innovations in promoting production.

**Unit - 2 : Market**

Meaning and Classification of Market.  
Meaning of Firm & Industry.  
Equilibrium of Firm & Industry : Short run & Long run,  
Role of Entrepreneur in promoting marketing,  
Meaning and features of Perfect Competition.

**Unit - 3 : Monopoly**

Meaning and features of Monopoly Market. Price and output determination in short run & long run under Monopoly Price discrimination, Meaning & types, Evils & Control of Monopoly.  
Meaning and feature of Oligopoly.

**Unit - 4 : Monopolistic Competition**

Meaning and features of Monopolistic Competition.  
Price and output determination in short run and in long run under Monopolistic Competition.  
Skimming & Penetration price policy.

**Unit - 5 : Factor Pricing**

Meaning of distribution. Marginal Productivity theory of distribution.



- a) Rent : Meaning & Concepts of Rent. Ricardian theory & Modern theory of rent - Quasi rent.
- b) Wages : Meaning & Concepts of Wages- Subsistence theory, Nominal & real wages. Wage differentials. Minimum Wages.
- c) Interest : Net & Gross Interest. Liquidity Preference theory of Interest.
- d) Profit : Meaning & Concepts of Profit. Risk & Uncertainty theory. Innovation theory.

**Reference Books:**

1. Principles of Economics	M. L. Seth.
2. Principles of Economics	K. K. Dewett.
3. A Text book of Economic Theory	A. W. Stonier and Hague
4. A Text book of Economics	P.A. Samuelson and Nogardus
5. Micro Economic Theory	M. L. Jingan
6. Modern Economics	K.K. Dewett and K.P.M. Sundaram
7. Micro Economics	P. N. Chopra
8. Economic Theory	Kulkarni and Kulkundrikar

**Allotment of Teaching Hrs**

Total Teaching Hrs	:	50 hrs
Practical 04 Hrs per week		
Two Internal Tests	:	02 Hrs
Group Discussion and Case Studies	:	04 Hrs
Seminar, Field Works and Home assignments	:	04 Hrs
Total	:	60 Hrs

**Allotment of Marks**

- A) Theory Exam - 80 Marks + Internal Marks 20 = 100
- B) Practical Exam - 40 Marks + Internal Marks 10 = 50

**Practicals :**

1. Study of different types of markets.
2. Identification of nature of market by visiting the local markets.
3. A practical study of oligopoly market.



**GROUP – E**  
**B.A Second Semester**

**1. HISTORY (Optional)**

**History and Archaeology**  
**B.A. II<sup>nd</sup> Semester**

History and Culture of Karnataka (1336 to 1956)

Paper II

One paper carrying 80 Marks and three hours duration  
(Teaching hours: 5 hours Per week – 16hours X 5 = 80 hours)

<b>UNIT-I</b> A. Vijayanagara: Introduction, Krishnadevaraya, Rattaraya, Battle of Talikota and Decline. B. Society: (Caste system and status of women), State Income, Industrial and Irrigation taxes, Guilds (Craft guilds and Merchant guilds), Art and Architecture. C. Bahamani and Adilshahis Md. Gavan, Ibrahim-II State income and trade contacts; development of cities	<b>20 Hours</b>
<b>UNIT-II</b> A. Religion and Philosophy: New religious sects, Kalamukha and Shakta Sufis in Karnataka B. Dasa Literature: Purandara dasa and Kartakadasa, Christianity and its impact. C. Wodeyars of Mysore: ChikkaDevaraja Wodeyar: Administrative system (Adara Kachert) Development of language (Education and Literature)	<b>15 Hours</b>
<b>UNIT-III</b> A. Minor dynasties: Nayakas of Keladi; and Chitradurga- Revenue policy of Shivappa Nayaka- B. Hyderali and Tippu Sultan- Tippu's Economic innovations. C. Commissioners rule in Karnataka: Mark Cubbon and Bowring; Their Administration and development of Mysore and Bangalore	<b>20 Hours</b>
<b>UNIT-IV</b> A. Krishnaraja Wodeyar IV: Dewans of Mysore: Sheshadri Iyyer, Vishweshwarayya, Mirza Ismail. B. Impact of West – Nationalism Freedom movement in Karnataka Contemporary Issues: Back ward classes movement. C. Unification of Karnataka.	<b>20 Hours</b>
<b>UNIT-V Maps</b> A. Vijayanagara empire under Krishnadevaraya B. Locate the Religious centers in Karnataka C. Places of Historical importance.	<b>05 Hours</b>



1. Talikote 2. Hampi 3. Bijapur 4. Bidar 5. Gulberga 6. Raichur 7. Chitradurga
8. Mudgal 9. Ikkeri 10. Bidanur 11. Bankapur 12. Budikote 13. Devanahalli
13. Mangalore 14. Mysore 15. Bangalore 16. Bhadravati 17. Esuru 18. Belagavi
19. Vidarashwatha 20. Belgaum

#### Books for Reference,

1. History of Karnataka : Desai P.B
2. Karnataka through the Ages : R.R Diwakar and others
3. History of South India : K.A. Nilakantha Shastri.
4. Early History of Deccan : Yazdani. E
5. History and Cultural of Karnataka : Basavaraaj. K.R
6. Concise History of Karnataka : Suryanath Karnat
7. History of Karnataka : H. V. Shreenivasamurthy
8. Karnatakada Itihasa : Suryanath Karnat
9. Karnatakada Itihasa : K. Sadashiva
10. ಕರ್ನಾಟಕದ ಇತಿಹಾಸ : ಎಂ. ಎಚ್. ಶರಣ್

## B.A Second Semester

### 2. Journalism & Mass Communication(Optional)

#### Paper : Fundamentals of Communication

Teaching : Theory 5 hours per week total 60 hrs

Examination Theory 80 marks 3 hrs duration 20 IA

1. Significance of communication process- elements of communication, Intra, Interpersonal, Group and Mass communication (12) hrs.
2. Basic Models of communication Shannon and Weaver, Berlo, Lass well and Schramm - Communication theories, psychological, sociological theories and Media Effects (12) hrs
3. Mass Media and their role-New communication media , Internet and Data bases- Electronic publications (12) hrs
4. Role of Communication in development-Application of modern communication technologies for development purposes (12) hrs.
5. Evolution of photography-Use of photographs by newspapers and magazine- Development cinema in India-Cinema as entertainment medium-Current status of Indian film industry (12) hrs.



## B.A.Second Semester

### 3. Persian (Optional)

**Teaching Hours : 5 Hours per week**

Paper II-Prose and Poetry

Scheme of teaching:-Duration-16 weeks-5 Hours per week

Prescribed Text Books

1. Adbayat-E-Farsi-PartII  
Prose & Poetry

By:- Prof. R.H.Killedar  
Pub By:-Anwar-E-Adbiya,

Bluestar Press,  
J.M. Road, Bijapur.

## B.A.Second Semester

### 4. Political Science (Optional)

Political Thought

80 Marks 5 hrs per week

#### PART-A – Western Political Thinkers

*Course Rationale:*

*This paper studies the classical tradition in political theory from Plato to Marx with the view to understand how the great Masters explained and analyzed political events and problems of their time and prescribed solutions. The legacy of the thinkers is explained with the view to establishing the continuity and change within the Western political tradition.*

Chapter- 1

Plato

Justice, Education, Philosopher King Communism,  
Ideal State

10 hours





Chapter-2

Aristotle - State, Classification of Constitutions, Revolution, The Best State

10 hours

Chapter-3

Machiavelli - Human Nature, Advice to the Prince, Separation of Politics from ethics and religion

J.S.Mill - Liberty and Representative government

10 hours

Chapter-4

Karl Marx - Theory of Communism, Economic Interpretation of History, Class war, Theory of surplus value, theory of State

4 hours

PART-B Indian Political Thinkers

*Course Rationale:*

*This paper attempts to introduce students to the entire gamut of political thinking in India from the beginning to the present. It focuses on key thinkers from ancient to modern times to understand their seminal contribution to the evolution of political theorizing in India. It emphasizes on the distinctive contribution of Indian thinkers to political theorizing and the relative autonomy of Indian political thought.*

Chapter- 1

Kautilya- a) Saptanga Theory b) Mandal Theory

4 hours

Chapter-2

Basaveshwara, Humanism, Casteless Society

4 hours

Chapter-3

Dr. B.R.Ambedkar, Social Justice, and Casteless Society

4 hours

Chapter-4

Dr. Ram ManoharLohia : Socialism, Democracy

4 hours

Chapter-5

M.K. Gandhi : Truth, Non-Violence and Satyagrah

4 hours

Books Reference

I. C L Wayper Political Thought, B.I.Publications, Bombay, 1983.



#### 4. Sociology (Optional)

##### B. A. Second Semester

##### COMMUNITY, INSTITUTIONS, CULTURE, AND SOCIAL CHANGE

##### Objectives of the Paper:

- To understand the Nature, Structure and Features of Communities.
  - Make the students to be acquainted with Basic Social Institutions.
  - To make the students to understand the contents of Culture and Civilisation.
  - To understand the processes of Social Change.
- 

<b>Unit- I</b>	<b>Social Community</b> (Meaning, Characteristics, & Types)	<b>12 Hours</b>
1.	Tribal Community	
2.	Rural Community	
3.	Urban Community	

<b>Unit- II</b>	<b>Social Institutions</b> (Meaning, Definitions, Features, & Functions)	<b>12 Hours</b>
1.	Marriage	
2.	Family	
3.	Religion	

<b>Unit- III</b>	<b>Culture and Civilisation</b>	<b>12 Hours</b>
1.	Culture: Meaning, Definitions, Nature, and Significance	
2.	Culture and Civilisation	
3.	Cultural Lag and Cultural Diffusion	



**Unit- IV Social Control****12 Hours**

1. Social Control- Meaning, Definitions, Features
2. Importance of Social Control
3. Types of Social Control
  - Informal Social Control: Customs, Folkways, and Mores
  - Formal Social Control: Law and Education

**Unit- V Social Change and Social Development****12 Hours**

1. Social Change: Meaning, Definitions, and Features
2. Theories of Social Change: Cyclical, Evolution and Diffusion
3. Factors of Social Change: Geographical, Biological, Technological, and Cultural
4. Forms of Social Change- Progress and Development

**References:**

1. Abraham Francis (2006): Contemporary Sociology, Oxford University Press, New Delhi.
2. Bottomore, T.B.: Sociology: A Guide to Problems and Literature. Bombay: George Allen and Unwin, India.
3. David Popenoe (1977): Sociology (3<sup>rd</sup> Edition), Prentice Hall, INC, Engelwood Cliffs, New Jersey
4. Davis Kingsley (1982): Human Society, Surfelt Publications, New Delhi
5. Fulcher James & Scott John (2003): Sociology (2<sup>nd</sup> Edition), Oxford University Press, New York.
6. Gisbert Pascual (1983): Fundamentals of Sociology: Orient Longmans, Bombay 1983.
7. Haralambos Michael (1997): Sociology- Themes and Perspectives. Oxford University Press, Delhi.
8. Jayaram, N. (1988): Introduction to Sociology. MacMilan, Madras, India.



## B.A THIRD SEMESTER

### 6. English (Optional)

Detailed Syllabus for BA  
(With effect from 2017-18 onwards)

#### Semester – III: Optional English

English Literature (Romantic and Victorian Age: 1798-1900)  
and Representative Text

Teaching Hours: 5 Hours per week

#### **Section – A: History of English Literature (30 Marks)**

1. Salient Features of Romanticism
2. Romantic Poetry
3. Romantic Prose
4. Features of Victorian Poetry
5. Victorian Poetry
6. Victorian Prose
7. Victorian Novel

#### **Section – B: Selected Poems (30 Marks)**

1. Tables Turned – William Wordsworth
2. Ode to the West Wind – P. B. Shelley
3. She Walks in Beauty – Lord Byron
4. Ode to Autumn – John Keats
5. Lotus Eaters – Lord Tennyson
6. Last Ride Together – Robert Browning
7. The Scholar Gypsy – Matthew Arnold
8. Nature's Questioning – Thomas Hardy

#### **Section - C: Modern English Grammar (20 Marks)**

1. Sentence and its Constituents – 2 Marks
2. Sentence Patterns – 4 Marks
3. Modifiers – 4 Marks
4. Sub-ordination & Co-ordination – 2 Marks
5. Kinds of Sentences (Conversion of Sentences) – 4 Marks
6. Homonyms and Homophones – 4 Marks

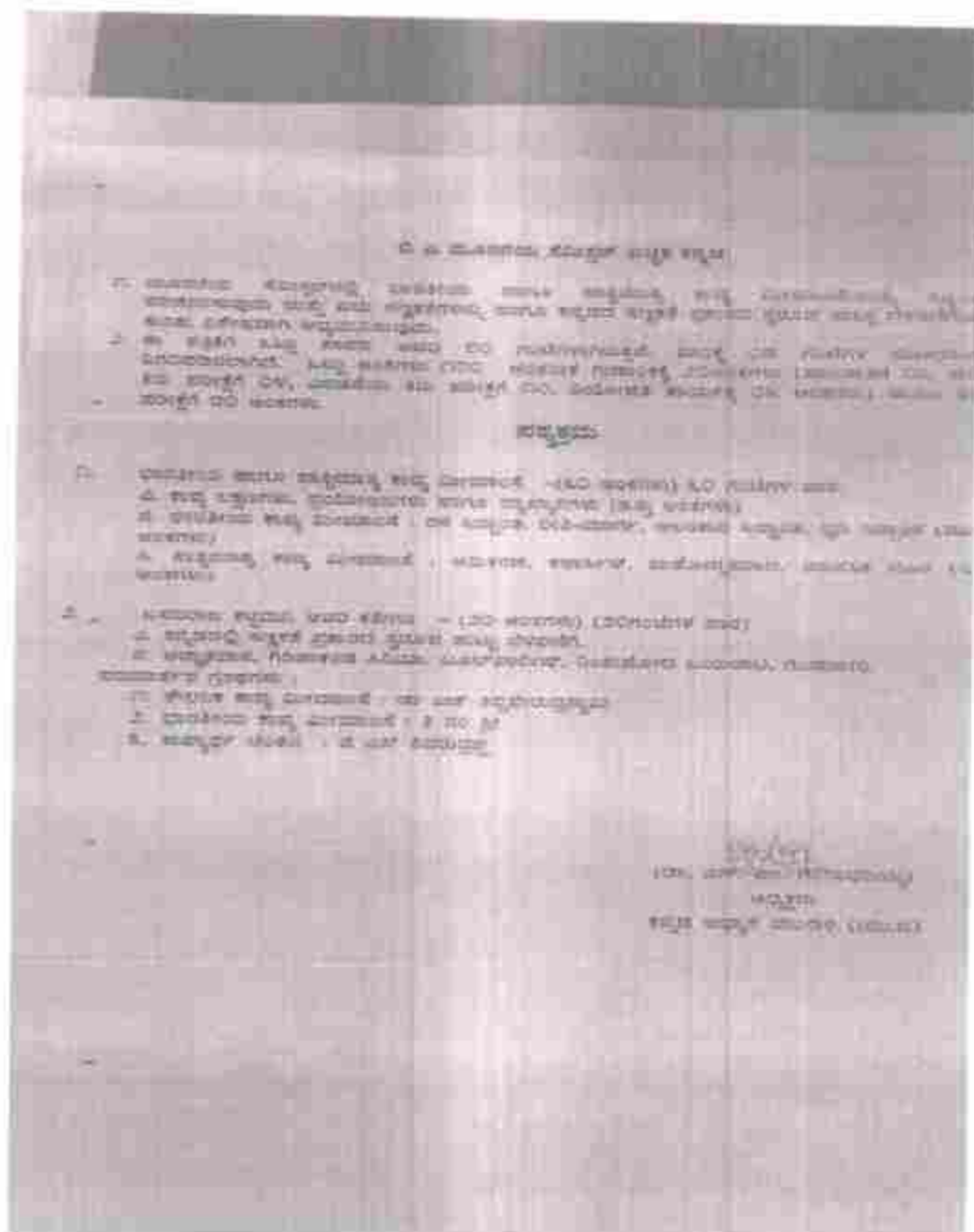
#### **Suggested Reading**

1. R. D. Trivedi, *A Compendious History of English Literature*
2. Edward Albert, *History of English Literature*
3. David Daiches, *History of English Literature*
4. N. Krishnaswamy, *Modern English Grammar*, Bangalore: MacMillan



### 3. Kannada (Optional)

With effect from 2017-18



## 4. Economics (Optional)

**B.A.III SEMESTER**  
**Subject: MONETARY ECONOMICS**  
**(Teaching Hrs. 5 per week)**

**Objectives:**

- 1) To provide knowledge of Money, Value of money and supply of money.
- 2) To provide tools for construction of index.
- 3) To clarify the concepts of inflation, deflation and stagflation.
- 4) To introduce the working of Money Market.

**Unit I: Money**

Meaning and Functions of Money; Supply of Money- $M_1$ ,  $M_2$ ,  $M_3$  and Money and Near Money-Paper standard-Merits and Demerits.

**Unit II: Value of Money**

Measurement of Value of Money-Consumer Price Index Number, Simple and Weighted Index Number, Measurement of consumer price index-Theories of Value of Money, Cash Transaction Approach and Cash Balance Approach.

**Unit III: Inflation and Deflation:**

Inflation-Meaning-Types-Causes-Effects-Control of Inflation  
Deflation-Meaning-Causes-Effects and Control of Deflation  
Stagflation-Meaning  
Meaning of inflationary gap with illustrations.

**Unit IV: Money Market**

Meaning and Structure of Money Market & Capital Market -Commercial Banking-Meaning-Functions of Commercial Banks-Credit Creation-New concepts in modern Banking, E-Banking, Meaning & Functions of Non-Banking Financial Intermediaries.

**Unit-V: Central Banking & Monetary Policy**

Objectives of Monetary Policy, Central Banking-Meaning-Functions-Methods of Credit Control-Quantitative and Qualitative Methods.

**References:**

- 1) R. R. Paul-Monetary Economics
- 2) D. M. Mithani-Money Banking & International Trade
- 3) M. L. Shet - Monetary Economics
- 4) A. B. N. Kulkarni and A. B. Kulkarni-Monetary Economics
- 5) R. S. Sayers-Commercial Banking
- 6) De'kock M.H.-Central Banking
- 7) H.R.K. - 'AIPAL'EA CxAO=A, AUg
- 8) Reserve Bank Of India Bulletin (Various Issues)-Mumbai
- 9) Websites :[www.google.com/Social Science/Economics](http://www.google.com/Social Science/Economics)/[www.wikipedia.org](http://www.wikipedia.org)



# GROUP- D

## B.A Third Semester

### 1. Agricultural Marketing (Optional)

Paper- III Principles of Agricultural Marketing  
(Teaching 5hrs per week) Marks: 100 (80 theory+20  
Internal Assessments)

#### Objectives:

1. To understand the various Agricultural Marketing concepts.
2. To get practical knowledge about Agricultural Marketing

#### Unit-I Agricultural Marketing:

Definition-scope and subject matter of Agricultural Marketing, History and growth of Markets. Importance of Agricultural marketing in Indian economy

10 hrs

#### Unit-II Classification of Markets:

Classification on the basis of time, span, place and competition. Types of agricultural markets-local markets, central markets and jobbing markets.

13 hrs

#### Unit-III Agricultural marketing in India:

Characteristics of agricultural Commodities, defects of agricultural marketing in India and its remedial measures.

10 hrs

#### Unit-IV Agricultural produce market committee:

Regulated market in India: Meaning, need, objectives, features of regulated markets, suggestions to improve the regulated markets.

12hrs

#### Unit-V Co-operative Business Organization:

Meaning, objectives, advantages of co-operative markets. Structure of co-operative markets. Evolution of co-operative marketing system in India Problems of co-operatives and its remedial measures.

15hrs



## GROUP – E

### 1. HISTORY (Optional)

#### History and Archaeology B.A. III<sup>rd</sup> Semester

History and Culture of Ancient India from early times to Cholas  
One paper carrying 80 Marks and three hours duration  
(Teaching hours: 5 hours per week – 16 hours X 5 = 80 hours)

#### UNIT-I

20Hours

- A. Geographical features of India (Physiography) and its impacts on History.
- B. Sources: Historical constructions, Writings: Colonial approach and Nationalist approach, Western and Subaltern.
- C. Harappan Civilization: Origin, Spread, Chronology and Main Characteristics (Society, religion, Economy, Trade, Polity and Art)

#### UNIT-II

20 Hours

- A. Advent of Aryans:  
The early vedic period,  
Changes in Later vedic phase: with special reference to polity, society, economy and religion.
- B. Rise of new Religious ideas: *Castes, Jainism and Buddhism.*
- C. The age of Mahajanapadas:  
Invasion of Alexander and its impacts.

#### UNIT-III

20 Hours

##### Gupta and post

- A. Samudragupta: Administration, Economy, Society, Feudalism, Literature, Religion, Science and Technology, Art and Architecture (The Myth of Golden age)
- B. Harshavardhana: His contributions to Religion, Nalanda University.
- C. Kushanra: Kanishka, his contributions to religion, Literature, Art and Architecture, Trade and Urbanization in the post Mौरyan period.

#### UNIT-IV

15 Hours

- A. The South: Sangam society and culture.
- B. Pallavas: Mahendravarma, Narasimhavarma, relations with Chalukyas and Rashtrakutas, Art and Architecture.
- C. Cholas: RajaRaja chola, Rajendra Chola Relations with Rashtrakutas and Chalukyas Of kalyan, Administration, Art and Architecture.

#### UNIT-V Maps

05Hours

- A. Harappan civilization sites.
- B. Extent of the empire of Samudragupta
- C. Places of Historical importance  
1. Bhodagay 2. Saranath 3. Pataliputra 4. Taxila 5. Prayag 6. Sanchi 7. Purushapura  
8. Nalananda 9. Amaravati 10. Maski 11. Badami 12. Kancheepuram 13. Madhumi  
14. Mahabalipuram 15. Tanjavur 16. Chidambaram 17. Rameshwari 18. Kumbakonam  
19. Tiruvanamantapuram 20. Basava Kalyan

#### Books for Reference.

1. Life and Culture of Ancient India : B.N. Luniya.
2. Social Cultural & Economic History of India : S. C. Rayachoudhary
3. History of Ancient India : R. S. Tripathi
4. History of Ancient India : K.L. Khurana
5. Wonder that was India : A.L. Bhasbham
6. History of Ancient India : E. P. Sharma
7. *संगमकालीन इतिहास* : ए. पी. शर्मा
8. *संगमकालीन इतिहास* : ए. पी. शर्मा
9. *संगमकालीन इतिहास* : ए. पी. शर्मा
10. *संगमकालीन इतिहास* : ए. पी. शर्मा





## B.A. Semester - III

### 4. Political Science (Optional)

#### Political Science Optional

With effect from 2017-18

#### Indian Government and Politics

80 Marks 5 hrs per week

**Course Rationale:**

*This paper introduces students to the Constitution of India in its structural and functional aspect. It is expected that the knowledge acquired in the introductory political theory paper*

*shall be juxtaposed in understanding the nitty-gritty of this paper.*

#### Chapter- 1-Introduction

Framing of the Indian Constitution, Preamble, Citizenship and salient features

12 hours

#### Chapter-2-Major Provisions

Fundamental rights, Directive Principles of State Policy and Fundamental Duties

12 hours

#### Chapter-3 Union Government

a) Executive-President-Election, Powers and Functions, Prime Minister and Council of ministers Power and functions

b) Legislature- composition powers and Functions of Loksabha and

Rajyasabha

c) Judiciary -Supreme Court composition powers and functions, Judicial Activism, Public Interest Litigation.

12 hours

#### Chapter-4 Party System

a)-National and Regional Parties, Organization and principles, Coalition Politics, Election Commission- Electoral Reforms b)- Comptroller and Auditor General of India-powers and functions

12 hours



## Chapter-5 Major Issues in Indian Politics

- a) - Caste, Religion, Language, Regionalism and Political of Reservation, Misuse of Art-356, Identity Politics
- b) Changing Nature of Center State Relations and Regional aspirations, Inter State disputes

12 hours

### Books Reference

1. M.V.Pylee, An Introduction to the Constitution of India, New Delhi, Vikas, 2005.
2. Subhash C. Kashyap, Our Constitution : An Introduction to India's Constitution and constitutional Law, New Delhi, National Book Trust, 2000.
3. Durga Das Basu, Introduction to the Constitution of India, New Delhi, Prentice Hall of India, 2001.
4. D.C.Gupta, Indian Government and Politics, VIII Edition, New Delhi, Vikas, 1994.
5. J.C.Johari, Indian Government and Politics, Delhi, Sterling Publishers, 2004.
6. V.D.Mahajan, Constitutional Development and National Movement in India, New Delhi, S. Chand and Co., latest edition.
7. Constituent Assembly Debates, New Delhi, Lok Sabha Secretariat, 1989.
8. Granville Austin, Working of a Democratic Constitution : The Indian Experience, New Delhi, Oxford University Press, 1999.
9. A.P.Avasthi, Indian Government and Politics, Agra, Naveen Agarwal, 2004.
10. J.A.J., I. \*AnA@ AgAwAAIAAgAdQAAIAAaAvAEE \*AAew sA WAAoPAzAEA vA/SPEEAAn
11. J.E.T. @. \*AnA@ AgAwAAIAAgAdQAAIAAaAvAEEcgAA: \*AAoPAzAEA «eAAAgA
12. I @ \*AAoPAzAgAJ. JZ: PABaoA AgAwAAIAAgAdQAAIAAaAvAPAgAA -zAAo@ \*AAoPAzAEA. UAZAUA



#### Reference Books

- 1) नदरशरुहलतकु ररुहलत थलतः वः सुः शरुहलतः
- 2) सल हः थलरुलरुतः थलरुसुदरुदलस  
लः अरुलरुत
- 3) सः अः थलरुतः वलदुःगुललवरुग
- 4) हः दसल हः वलरुतः इः लरुहलसः अशरुतः लवरुत
- 5) हः दसल हः वलरुतः इः लरुहलसः शरुतः लरुतः
- 6) वलरुतः थलरुतः पः वलदुःगुललवरुग
- 7) वलरुतः थलरुतः पः वलदुःगुललवरुग
- 8) हः दसल हः वलरुतः इः लरुहलसः रलतनलथः शरुतः

#### 4. Sociology (Optional)

## B. A. SOCIOLOGY SYLLABUS

B. A. Third Semester

With effect from 2016-17

### STUDY OF INDIAN SOCIAL THOUGHT

#### Objectives of the Paper:

- ① To understand the Nature of Development of Social Thought.
- ② To understand the views of ancient Indian thinkers on Dharma and Institutions.
- ③ Make the students to understand the Social Ethics of thinkers of different ages.

#### Unit-I Introduction

12 Hours

1. Meaning and Features of Social Thought
2. Development of Social Thought
3. Importance of Social Thought



**Unit- II    Manu** **12 Hours**

1. Dharma - Meaning, Forms
2. Varnashrama Dharma
3. Views of Manu on Marriage and Family.

**Unit- III    Basaveshwara** **12 Hours**

1. Concept of Kayaka
2. Social Equality
3. Status of Women.

**Unit- IV    Mahatma Gandhiji** **12 Hours**

1. Truth and Non Violence
2. Satyagraha
3. Sarvodaya

**Unit- V    Other Thinkers** **12 Hours**

1. Jyotibha Phule                   : Upliftment of Weaker Section
2. Dr. B. R. Ambedkar           : Untouchability and its Eradication
3. M. N. Srinivas                 : Dominant Caste, Sanskritisation and Westernisation

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**References:**

1. Sharma, R. N. (1981): Indian Society. Media Publishers and Promoters Ltd., Bombay.
2. Sharma, R. N. and Sharma, R. K.: Indian Social Thought. Media Publishers and Promoters Ltd., Bombay.
3. Barnes, H.E. (1959): Introduction to the History of Sociology. Chicago: The University of Chicago Press.



## 2. Journalism & Mass Communication (Optional)

### B.A Semester III

Teaching – Theory 5 hours per week Total 60 hrs.

1. Nature and elements of news-News values new sources
2. Reporting section in a newspaper-Role of a Chief Reporter-Competence of reporting staff (12 hrs)
3. News writing skills, intro, types of leads –Writing backgrounders and interpretation (12 hrs)
4. Reporting speeches, court, crime, legislature, seminar and sports-Interview techniques-Writing teachers-Freelancing (12 hrs)
5. Legal aspects of reporting-Freedom of speech and expression in Indian constitution-Reasonable restrictions-Legislatures privileges. (12 hrs)

#### Reference Books:

1. Handbook of Journalism and Mass Communication-U.B. Agrawal & V.S.Gupta
2. Journalism – N.Yayapalan
3. Into the Newsroom – Teel & Taylor
4. News Writing – G.A. Hough
5. Patrika Bhashe- Padmaraja dandavate
6. Nudichitra-Niranjana Vanalli
7. Patrikavritti – K.V. Nagaraj and P. Nagachar

#### Four assignments to be submitted for the award of IA marks (10)

1. Select a Published interview and justify.
2. Choose five news items and identify
3. Identify five news items of legal aspects from daily newspapers and examine their legal dimensions.
4. Visit a newspaper office and write down your impression in 400 words.



## B.A FOURTH SEMESTER

### 5. English (Optional)

Detailed Syllabus for BA  
(With effect from 2017-18 onwards)  
Semester – IV: Optional English

English Literature (20<sup>th</sup> Century) and Representative Text

Teaching Hours: 5 Hours per week

**Section – A: History of English Literature (20<sup>th</sup> Century Literature) 30 Marks**

1. Introduction to 20<sup>th</sup> Century English Literature
2. 20<sup>th</sup> Century Drama – Poetic Drama & Irish Literary Movement
3. 20<sup>th</sup> Century Poetry – Georgian Poetry & War Poetry
4. 20<sup>th</sup> Century Novel – Stream of Consciousness Novel & Women Novelists

**Section – B: Selected Short Stories 30 Marks**

1. A Hanging - George Orwell
2. Adventures of the Empty House – A. C. Doyle
3. The Conjuror's Revenge – Stephen Leacock
4. The Fishing-Boat Picture- Alan Sillitoe
5. A Cup of Tea - Katherine Mansfield
6. The Verger - Somerset Maugham

**Section – C: General Linguistics (20 Marks)**

1. Linguistics
2. Morphology
3. Phonology
4. Syntax
5. Semantics
6. Competence and Performance
7. Phrase and its classes

**Suggested Reading**

1. R. D. Trivedi. *A Compendious History of English Literature*
2. Edward Albert. *History of English Literature*
3. A. C. Ward. *The Twentieth Century Literature*
4. M. H. Abrahms. *A Glossary of Literary Terms.*
6. John Lyons. *Language and Linguistics*
7. Crystal, David: *What is Linguistics?*
8. Dinneen, F.P. : *An Introduction to General Linguistics*
9. Krisnaswamy, N.: *Linguistics for Language Teachers*
10. Verma, S. K. and Krisnaswamy, N.: *Modern Linguistics – An Introduction*



ಬಿ ಎ ನಾಲ್ಕನೆಯ ಸೆಮಿಸ್ಟರ್ ವ್ಯಕ್ತಿಕ ಕನ್ನಡ

೧. ನಾಲ್ಕನೆಯ ಸೆಮಿಸ್ಟರ್‌ನಲ್ಲಿ ಅಲಂಕಾರ ಮತ್ತು ಭಂಡವನ್ನು ಕುರಿತು ಸ್ತುತಿಯಾಗಿ ಪರಿಚಯಿಸುವುದು ಮತ್ತು ಹತ್ತು ಭಾವಗೀತೆಗಳನ್ನು ಹಾಗೂ ಭಾವಗೀತೆ ಪ್ರಕಾರದ ಸ್ತೋತ್ರ ಹಾಲು ಬೆಳವಣಿಗೆಯನ್ನು ಕುರಿತು ವಿಶೇಷವಾಗಿ ಅಭ್ಯಯಿಸುವುದು.
೨. ಈ ಪತ್ರಿಕೆಗೆ ಒಟ್ಟು ಪಾಠದ ಅವಧಿ ೮೦ ಗಂಟೆಗಳಿಗಿರುತ್ತದೆ. ಪಾಠಕ್ಕೆ ೦೫ ಗಂಟೆಗಳ ಬೇರ್ಪಡೆಯನ್ನು ನಿಗದಿಪಡಿಸಲಾಗಿದೆ. ಒಟ್ಟು ಅಂಗಳು ೧೦೦ ಅಂತರೀಕ ಗುಣಾಂಕಕ್ಕೆ ೨೦ ಅಂಗಳು (ಹಾಜರಾತಿಗೆ ೦೩, ಮೊದಲ ಕಡು ಪರೀಕ್ಷೆಗೆ ೦೪, ಎರಡನೆಯ ಕಡು ಪರೀಕ್ಷೆಗೆ ೧೦, ನಿರೀಕ್ಷಿತ ಗುಣಾಂಕಕ್ಕೆ ೦೩ ಅಂಗಳು) ಹಾಗೂ ಉಳಿದ ಪರೀಕ್ಷೆಗೆ ೮೦ ಅಂಗಳು.

ಪಠ್ಯಕ್ರಮ

೧. ಅಲಂಕಾರ ಮತ್ತು ಕನ್ನಡ ಭಂಡವು - (೩೦ ಅಂಗಳು) ೩೦ ಗಂಟೆಗಳ ಪಾಠ
  - ಎ. ಅಲಂಕಾರ ಪ್ರಸ್ತಾನವನ್ನು ಕುರಿತು ಒಳನೋಟಗಳು (ಹತ್ತು ಅಂಗಳು)
  - ಬಿ. ಅಲಂಕಾರಗಳು ತಪ್ಪು ಅಲಂಕಾರಗಳು - ಯಮಕ, ಅನುಪ್ರಾಸ : ಅರ್ಥಾಲಂಕಾರಗಳು - ದೀಪಕ, ಉದಾಹರಣೆ, ಉತ್ತೇಜ್ಜೆ, ವ್ಯಾಜ್ಯಾಂಕ, ಸ್ತುತಿಯೋಕ್ತಿ (ಇಪ್ಪತ್ತು ಅಂಗಳು)
  ೩. ಕನ್ನಡ ಭಂಡವಿನ ಬೆಳವಣಿಗೆಯ ಸ್ವರೂಪ ಪರಿಚಯ (ಹತ್ತು ಅಂಗಳು)
  ೪. ವ್ಯಾಜ್ಯ ಕರ್ನಾಟಕ ವ್ಯಕ್ತಿಗಳು, ಕಂದ, ರಾಗ, ಸಂಗೀತ, ತ್ರಿಪದಿ (ಇಪ್ಪತ್ತು ಅಂಗಳು)
೨. ಕಲ್ಪನಗಳು : ಅನಂದ ಕಂದ - ( ೨೦ ಅಂಗಳು) (೨೦ ಗಂಟೆಗಳ ಪಾಠ)
  - ಎ. ೧) ಬೆಳ್ಳಿಯಾಕೆ ೨) ಯಾರೋ ವಿಶೇಷ ಬರಹದಂತೆ ! ೩) ಬೆಳವಣಿ ಎಲ್ಲರೂ ೪) ನಮ್ಮೂರ ಚಾಪಿ
  - ೫) ಯಾತಕವು ಹುಟ್ಟಿದ್ದು ಫಾಲ್ಗುಣ ! ೬) ನಿರೀಕ್ಷೆ ೭) ಪ್ರಜ್ಞಾಲಯ
  ೮. ಭಾವಗೀತೆ ಪ್ರಕಾರದ ಸ್ತೋತ್ರ ಹಾಲು ಬೆಳವಣಿಗೆ (ಹತ್ತು ಅಂಗಳು)

ಪಠನಾರ್ಥಕ ಗ್ರಂಥಗಳು:

೧. ಕನ್ನಡ ಕೈಪಿಡಿ : (ಸಂ) ಕುವೆಂಪು
೨. ಕನ್ನಡ ಉಪಲಯಾನಂದ ;
೩. ಕನ್ನಡ ಭಂಡೋ ವಿಜಯ : ೩ ಎಸ್ ಕೆಆರ್



- Rural Economy of India by A.N.Agarwal & Kundanlal

#### Journals and Magazines

- Yojana
- Kurukshetra
- Journal of Rural Development
- Journal of Rural & community Development
- Journal of Agricultural, Extension & RI Devpt
- The International Journal for Rural Development.

#### Websites:

- [www.panchayat.nic.in](http://www.panchayat.nic.in)
- [www.agricoop.nic.in](http://www.agricoop.nic.in) Ministry of Agriculture
- [www.rural.nic.in](http://www.rural.nic.in) Ministry of Rural Devpt
- [www.ssi.nic.in](http://www.ssi.nic.in) Ministry of Small scale industries
- [www.mospi.nic.in](http://www.mospi.nic.in) Ministry of Statistics & programme implementation.
- [www.dhi.nic.in](http://www.dhi.nic.in) Ministry of Heavy industry & public enterprises.
- [www.planningcommission.nic.in](http://www.planningcommission.nic.in)
- <http://rdpe.kar.nic.in> Govt. of Karnataka, Rural Devpt. & panchayat raj
- <http://des.kar.nic.in> Govt. of Karnataka, Directorate of Economics & Statistics.
- <http://sahakara.kar.gov.in> Govt. of Karnataka, Dept of co-operation
- <http://emptry.kar.nic.in> Govt. of Karnataka, Directorate of employment & training.

## 4. Economics (Optional) – IV Sem

### Subject: INTERNATIONAL ECONOMICS

(Teaching Hrs. 5 per week)

#### Objectives:

1. To clarify the concepts of internal and international trade.
2. To understand foreign exchange and exchange control.
3. To know the working of International Economic organizations.

#### Unit-I: International Trade:

Meaning, Internal and International Trade, Gains from International Trade

Theories of International trade-Classical and Modern Theories of International trade.

Terms of trade, Factors affecting terms of trade

10 hours.

#### Unit-II: Trade Policy:





Free v/s Protection Trade policy; arguments for and against; Trade barriers- Tariffs and Quotas.

10 hours

**Unit-III Balance of Payment:**

Meaning of BOT and BOP- Causes for disequilibrium- Methods of correcting disequilibrium in the Balance of Payment.

A model of Balance of Payment.

10 hours

**Unit-IV Foreign Exchange and Exchange Control:**

Foreign exchange –Meaning and concepts- Rate of exchange, Fixed and Flexible Exchange rates. Purchasing power parity theory. Exchange control- Meaning, Objectives and methods of exchange control.

10 hours

**Unit-V International Economic Organizations:**

Structure, Functions and Performance of International Monetary Fund (IMF) International Bank for Reconstruction and Development (IBRD) and World Trade organization (WTO).

10 hours

**Reference Books:**

1. M.L.Jingan : International Economics.
2. M.L. Seth : i) International Economics  
ii) Money, Banking and International Trade
3. K.R.Gupta : International Economics.
4. R.R.Paul : Monetary Economics.



# GROUP- D

## B.A Fourth Semester

### 1. Agricultural Marketing (Optional)

#### PAPER- IV - VALUE CHAIN IN AGRICULTURAL MARKETING

Teaching 5hrs per week

Marks: 100 (80 theory+20 Internal Assessments)

**Objectives:** To develop different strategies for enhancement of quality in agricultural products.

#### Unit-I Processing:

Meaning and need, types of processing, place Time form processing, Advantages of processing; problems of processing and its measures.

10hrs

#### Unit-II Grading, Standardization & Labeling:

Meaning, types, Advantages of grading & labeling, AGMARK- producers' Difficulties in grading- consumer's perception, Criteria for Grade standards, inspection & quality control

13hrs

#### Unit-III Storage & Warehousing:

Meaning & need, importance of storage, Losses in storage, Warehousing: meaning & functions of warehousing, types of warehousing, working of central warehousing corporation, state warehousing corporation, Causes of the slow progress of warehousing in India and Suggestions for improvement.

15hrs

#### Unit-IV Transportation:

Role of transportation in agricultural Marketing, Advantages of transportation, Functions of Transportation, factors affecting the cost of transportation Suggestion for improvement.

12hrs

#### Unit- V Agricultural Finance:

Meaning, nature, scope & need for Agricultural finance- sources of agricultural Finance, Advantages of agricultural finance, Government Policy towards agricultural finance.

10hrs



5) ಕೆಳಗೆ ಕೊಡಲಾದ ಪ್ರಶ್ನೆಗಳನ್ನು ಉತ್ತರಿಸಿ (ಪ್ರತಿ 2)

- ರಾಜ ಒಪ್ಪಂದ
- ಕೋಟೆ ರಚನೆ
- ಹಿಸ್ ಸುಲ್ತಾನ

## GROUP – E

### B.A Fourth Semester

#### 1. HISTORY (Optional)

##### History & Archaeology

##### B.A. IV Semester

##### History of India from -1526 AD to 1707

One Paper carrying 80 marks and 3 hours duration.

(Teaching hours :5 hours per week - 16 weeks x 5 = 80 hours)

<b>UNIT : I</b>	<b>19 Hrs</b>
A. Political conditions of India on the eve of Babars Invision. B. The Mughal Empire- Babar and Humayun. C. The Sur Dyanasty – Shershah sur- His administration.	
<b>UNIT : II</b>	<b>20 Hrs</b>
A. Akbar- His conquests, Rajaput and Religious Policies. B. Administration under Akbar. C. Jahangir : his achievements- Nurjahan.	
<b>UNIT : III</b>	<b>15 Hrs</b>
A. Shahajahan: The Golden age of art & architecture. B. Aurangzeb : His Religious, Rajaput and Deccan Policies. C. Causes for the Decline of Mughal empire.	
<b>UNIT : IV</b>	<b>20 Hrs</b>
A. The Contributions of Mughals- With reference to Administration Socio- Economic condition, religion, Art and Architecture. B. Bhakti movement : Kabir, Gurunanak, Meerabai &	



- Shaik Mohinuddin Chisti.  
C. Rise of Marathas – Shivaji- His military achievements and administration.

**UNIT : V**

**06 Hrs**

Map Topics (one question compulsory)

- A. Mughal empire under Akbar.  
B. Maratha Kingdom under Shivaji

**Books for Reference**

- 1) History of Medieval India by: L. P. Sharma
- 2) History of Medieval India by: V.D. Mahajan
- 3) Advanced Study in the History of Medieval India- Vol.II & III  
J. L. Mehta
- 4) Medieval Indian History-A L. Srivastav
- 5) ಮಧ್ಯಯುಗೀನ ಭಾರತದ ಇತಿಹಾಸ : ಎ.ಪಿ. ಶರ್ಮಾ
- 6) ಮಧ್ಯಯುಗೀನ ಭಾರತದ ಇತಿಹಾಸ : ಡಾ: ಕೆ. ಸವಾಸಿಬ
- 7) ಮೊಗಲರ ಕಾಲದ ಭಾರತ : ಡಿ.ಪಿ. ಶರ್ಮಾ
- 8) ಮಧ್ಯಯುಗೀನ ಭಾರತದ ಇತಿಹಾಸ : ಡಾ: ಕೆ. ಎನ್.ಶರ್ಮಾ

**2. Journalism & Mass Communication (Optional)**

**BA – IV Semester**

**Paper No. 4 Editing and Production**

Teaching –Theory 5 hours per week Total 60 hrs.

Examination Theory 80 marks 3 hrs duration 20 IA

1. Editorial section of a newspaper-Need for editing –Techniques of editing a newspaper-Newspaper jargons. (12 hrs)
2. Function of Editor, News Editor, Chief-Sub Editor and qualities of a Sub Editor. (12 hrs)
3. Headline writing techniques – Types of headlines-Newspaper design and layout-Editing pictures – using of infographics. (12hrs)



4. Contents of editorial page-Art of writing editorials (12hrs)
5. Application of computers for composing and pagination-Use of prominent software packages-Newspaper printing methods.

**Reference Books:**

1. The art of edition-Baskette & Scissors
2. Elements of Modern journalism-S.R. Sharma
3. News Reporting and Editing-K.M. Shrivatsava
4. Journalistic Handbook – M.V. Kamath
5. Vritti Patrikodyama M.V. Kamath
6. Talebaraha-Visweswara Bhat
7. Internet Patrikodyama-Sridhara Dixit

**Four Assignments to be submitted for the award of IA marks (10)**

1. Selection of ten best headlines in a daily with justification
2. Content analysis of the editorial page of a daily
3. Selection and presentation of best feature published in a magazine
4. Selection of the best-designed page of a daily with justification.

**3. Folk literature (Optional)**

ಬಿ. ಎ.-4 ನೇ ಸೆಮಿಸ್ಟರ್ ಪತ್ರಿಕೆ-4 2012-13 ಮತ್ತು ನಂತರ  
ಸಂಕ್ಷಿಪ್ತ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ

ಬೋಧನಾ ಅವಧಿ: ವಾರಕ್ಕೆ 5 ಗಂಟೆಗಳು

ಅ) ಸಂಕ್ಷಿಪ್ತ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆ	80
ಬಿ) ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ	20

- ಘಟಕ-1 ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಪ್ರಾಚೀನತೆ ಮತ್ತು ಕವಿರಾಜ ಮಾರ್ಗ  
ಚರಿತೆಯ ಉಪ್ಪು ಪ್ರಕಾರ ಸ್ವರೂಪ ಮತ್ತು ಲಕ್ಷಣ (ಉದಾಹರಣೆಗಳು)  
ಪ್ರಮುಖ ಚರಿತೆಯ ಕವಿಗಳು : ಪಂಪ, ರನ್ನ, 1ನೇ ನಾಗರಾಜ, ನಯನೇನ, ಜನ್ನ, ಪದ್ಮನಾಭದೇವ
- ಘಟಕ-2 ವಚನ ಸಾಹಿತ್ಯದ ಸ್ವರೂಪ ಮತ್ತು ವೈಶಿಷ್ಟ್ಯಗಳು  
ಪ್ರಮುಖ ವಚನಕಾರರು : ಚಿಂತರದಾಸಿಮಯ್ಯ, ಅಲ್ಲಮಪ್ರಭು, ಬಸವಣ್ಣ, ಅಕ್ಕಮಹಾದೇವಿ, ಅಂಬರ ಬೊಡೆಯ
- ಘಟಕ-3 ರಗಳೆ ಸಾಹಿತ್ಯದ ಸ್ವರೂಪ : ಪರಿಚಯ



**Scheme of Examination**

Q1. Multiple choice questions	1*10=10
Q2. Essay type questions from the text	3*05=15
Q3. Questions on R.C from the text	3*05=15
Q4. Translation & Explanation from the text	3*05=15
Q5. Summary of the Passage/Poem from the text with choice	1*15=15
Q6. Short notes with choice (On the history of Persian Literature)	2*05=10

**4. Political Science (Optional)**

**B.A. Semester - IV**  
**With effect from 2017-18**

**Karnataka Government & Politics'**  
**80 Marks 5 hrs per week**

**Chapter- 1-Unification Movement**

a) Origin and Evolution of unification movement in Karnataka Literary, Cultural and Institutional dimensions of movement

b) Geo-Politics of Karnataka-Physical setting-location, size and administrative divisions, natural vegetation, mineral resources and Human resources

**12 hours**

**Chapter-2-State Government**

**Executive : Governor, Chief Minister and Council of Ministry**  
**Legislature: Composition, power and functions of Legislative Assembly and Legislative Council Utility of the Second chamber**  
**Judiciary : Composition, power and functions of State High Court, Karnataka Lokayukta powers and functions,**

**15 hours**



### Chapter-3-Party System

a) Political Parties of Karnataka- Indian National Congress, Bhartiya Janata Party, Janata Dal, (Secular) b) Coalition Politics in Karnataka

10 hours

### Chapter-4-Local self-Government

a) Panchayati raj system in Karnataka, b) Democratic Decentralisation- urban and local governments 73<sup>rd</sup> and 74<sup>th</sup> constitutional amendments.

10 hours

### Chapter-5-Major Issues in Karnataka Politics

a) Border Disputes-Karnataka/Maharashtra

b) Water disputes-Cauveri, and Mahadayi (Kalasa/Banduri)

c) Backward class movement and Caste politics in Karnataka  
d) E-Governance in Karnataka-Bhoomi-Digital Land Records and Sakal

e) Regional Disparity

15 hours

### Books Reference

1. S.R. Maheshwari Comparative Government and Politics, Lakshmi Narain Agarwal, Agra, 2004

2. S. N. Ray Modern Comparative Politics: Approaches Methods and Issues, Prentice Hall of India, New Delhi, 2004

3. Gabriel Almond, Comparative Politics Today : A World View, G.B. Powell, Jr., Pearson Publication, New K. Strom, Delhi, 2004 R.J. Dalton

4. Herman Finer The Theory of Practice of Modern Government, Surjeet Publications, Delhi, 1977

5. Manoj Kumar Comparative Politics and Political Analysis, Anmol Publications, New Delhi, 2004

6. S.R. Maheshwari Comparative Government and Politics, Lakshmi Narain Agarwal, Agra, 2004

7. N. Jayapalan Modern Governments and Constitutions, Atlantic Publisher and Distributors, New Delhi, 2002



- 5) सुगम ह.द. याकरण : डे. वशीधर तथा धम्मपाल सा. ी  
 6) रचना विधि : परमानंद गु. त  
 7) ह.द. याकरण : ज.क.शोर सा.द. सं.ह.  
 8) याकरण ट.प. रामदेव एम.ए.

#### 4. Sociology (Optional)

## B. A. SOCIOLOGY SYLLABUS

B. A. Fourth Semester

With effect from 2016-17

### STUDY OF WESTERN SOCIOLOGICAL THOUGHT

#### Objectives of the Paper:

- Make the students to understand the basic theories of Western Sociological Thought.
- Make the students to understand the grand theories of Social Evolution.
- To make the students to understand the methodology of Social Sciences.

#### Unit- I     Auguste Comte

12 Hours

1. Positivism and Law of three Stages
2. Hierarchy of Sciences
3. Social Statics and Social Dynamics

#### Unit- II     Herbert Spencer

12 Hours

1. Theory of Evolution- Social Darwinism
2. Organic Analogy
3. Types of Society





**Unit- III Max Weber**

**12 Hours**

1. Power and Authority
2. Weber's views on Religion and Society
3. Bureaucracy

**Unit- IV Emile Durkheim**

**12 Hours**

1. Methodology of Social Sciences
2. Division of Labour
3. Theory of Suicide

**Unit- V Other Thinkers**

**12 Hours**

1. **Karl Marx** : Class Struggle
2. **Lewis A. Coser** : Conflict and Social Change
3. **Robert K. Merton** : Social Structure and Anomie

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**References:**

1. Aron Raymond (1982): *Main Currents in Sociological Thought* (2 Volumes), Harmondsworth, Middlesex, Penguin Books.
2. Barnes, H. E. (1959): *Introduction to the History of Sociology*. Chicago: The University of Chicago Press.
3. Borgardus, E. A.: *The History of Social Thought*
4. Coser Lewis, A. (2001): *Masters of Sociological Thought*. (2 Volumes), Rawat Publishers, New Delhi
5. Fletcher Ronald (1994): *The Making of Sociology* (2 Volumes). Rawat Publication, Jaipur.
6. Francis Abraham and John Henry Morgan (1985): *Sociological Thought*. MacMillan, India Ltd., New Delhi
7. George Ritzer (Ed.): *The Blackwell Companion to Major Social Theories*. Blackwell Publishers, Great Britain.



### Scheme of Examination :

Total marks 100 (Theory 80 + Internal Assessment 20 marks)

1. Each paper of 100 marks shall carry 20 marks Internal Assessment out of the 20 marks 10 shall be for semester test & remaining 10 shall be for assignment records skill developments.
- II. In each paper two test shall be conducted for the award of Internal Assessment marks & each of one hour duration for maximum of 20 marks reduced to ten later. First test shall be conducted in 8th week & II test in 12th week of respective semester. The average marks shall be taken as final Internal Assessment marks for assignment marks for the test component.
- III. The award of the Internal Assessment marks for assignment records skill development shall be based on the submission of the same by the candidates duly certified by the concerned teacher.

The question paper should be broadly based on the following pattern

Q1. Multiple choice questions from all text (10 out of 10)	1×10 = 10
Q2. One Question on from Biography / Novel (1 out of 2)	1×15 = 15
Q3. One Essay /critical question on first text (1 out of 2)	1×15 = 15
Q4. Short Note question on first Text (2 out of 4)	2×7½ = 15
Q5. One Essay /critical question on second Text (1 out of 2)	1×15 = 15
Q6. One Short Note Question on 2nd Text (2 out of 4)	1×10 = 10

## 7. English (Optional)

**Detailed Syllabus for BA**  
**(With effect from 2018-19 onwards)**  
**Semester – V: Optional English Paper I**  
**Literary Criticism**  
**Teaching Hours: 5 Hours per week**

### Topics

1. Criticism: Nature, Functions and Types
2. Aristotle and Plato: Mimesis
3. What is Poetry?
4. Longinus: Sublime
5. Classicism, Romanticism and Realism
6. Matthew Arnold: Criticism and Creation and Touchstone Method
7. I. A. Richards: Principles of Criticism
8. Allen Tate: The New Criticism
9. William Empson: Ambiguity
10. T. S. Eliot: Tradition and Individual Talent



### Suggested Reading

1. Abrams, M. H. *The Mirror and the Lamp: Romantic Theory and the Critical Tradition*. New York: Oxford UP, 1953, 1971.
2. Bennet, Andrew and Nicholas Royle. *Introduction to Literature, Criticism and Theory*. New Delhi: Pearson, 2007.
3. D.J. Enright and Ernst de Chickera. (eds.) *English Critical Texts*; Oxford: OUP, 1991.
4. Habib, M. A. R. *A History of Literary Criticism: From Plato to the Present*. Oxford: Blackwell, 2005.
5. Kennedy, George Alexander (Ed.) *The Cambridge History of Literary Criticism: Volume 1, Classical Criticism*. Cambridge: Cambridge University Press, 1990.
6. Kennedy, George Alexander. *Classical Rhetoric and Its Christian and Secular Tradition from Ancient to Modern Times*, Chapel Hill, NC: University of North Carolina Press, 1980.
7. W.K. Wimsatt and Cleanth Brooks. *Literary Criticism: A Short History*. New Delhi: Oxford & IBH, 1967, 2004 rpt.
8. R. A. Scott-James. *Making of Literature*.

### Pattern of Question Paper

(80 Marks paper of three hours and 20 Marks for L.A.)

1) Objective type questions based on all the prescribed topics.	10X1=10
2) Essay type question (One out of Two)	10
3) Essay type question (One out of Two)	10
4) Essay type question (One out of Two)	10
5) Essay type question (One out of Two)	10
6) Essay type question (One out of Two)	10
7) Essay type question (One out of Two)	10
8) Short Notes (Two out of Four)	2X5=10
	<b>80</b>

### RANI CHANNAMMA UNIVERSITY, BELAGAVI

#### Detailed Syllabus for BA

(With effect from 2018-19 onwards)

#### Semester – V: Optional English Paper II

**Indian English Literature, Translation Studies and Representative Text**

**Teaching Hours: 5 per week**

#### **Section – A: History of Indian English Literature (30 Marks)**

1. Pre -Independence Indian English Poetry.
2. Fiction during the Gandhian era,
3. Post -Independence Indian English poetry.
4. Post -Independence Indian English Fiction up to 2000.

#### **Section – B: Selected Poems (30 Marks)**

1. Summer Woods - Sarojini Naidu



2. A Worker's God - Kunj Bihari Das
3. A Country - Jayant Mahapatra
4. The Lotus - Toru Dutt
5. Very Indian Poem in Indian English - Nissim Ezekiel
6. My Grandmother's House - Kamala Das
7. An Old Woman - Arun Kolatkar
8. Cops and Robbers - S. Diwakar
9. The Mistress - K. N. Daruwala
10. I Made Myself an Expert - R. Parthasarathy

#### Section – C: Translation Studies (20 Marks)

1. Concept of Translation
2. Evolution of Translation Studies
3. Types of Translation
4. Translation of a Literary passage from Kannada to English and Vis-a-Vis.

#### Suggested Reading

1. M. K. Naik - History of Indian English Literature –
2. K. R. Srinivas Iyengar - History of Indian Writing In English Literature –
3. Mehrotra - Indian English Literature –
4. Mukherjee Sujit - *Translation as Discovery*, Hyderabad: Orient Longman
5. Ramanijan, A.K. - *Speaking of Siva*, Penguin Classics.

#### Pattern of Question Paper

(80 Marks paper of three hours and 20 Marks for I.A.)

- |                                                                                                                                                             |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1) Objective type questions on Indian English Literature<br>(Questions will be set on Authors, works, trends & concepts;<br>Excluding the prescribed Poems) | 10X1=10 |
| 2) Essay type question on Indian English Literature (One out of Two)                                                                                        | 10      |
| 3) Essay type question on Indian English Literature (One out of Two)                                                                                        | 10      |
| 4) Essay type question on Selected Poems (One out of Two)                                                                                                   | 10      |
| 5) Essay type question on Selected Poems (One out of Two)                                                                                                   | 10      |
| 6) Short Notes on Selected Poems (Two out of Four)                                                                                                          | 2X5= 10 |
| 7) Questions on Translation Studies                                                                                                                         | 2X5=10  |

#### Old Pattern for Exam

- |                                                                                                                     |         |
|---------------------------------------------------------------------------------------------------------------------|---------|
| 8) Questions on Translation of a Literary Passage<br>(From Kannada to English and Vis-à-vis about 100 to 150 words) | 1X10=10 |
|---------------------------------------------------------------------------------------------------------------------|---------|

#### Change incorporated in BoS with effect from 21-08-2018

- |                                                                                                                                                    |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 8) Questions on Translation of a Literary Passage<br>(A Passage in English will be given which can be translated in<br>Kannada/Marathi/Hindi/Urdu) | 1X10=10 |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------|

80



**Reference and Text Books:**

1. Gupta S.P. : Statistical Methods.
2. Gupta C.B. (1978) – An Introduction to Statistical Methods. S/c Vaikas Pub. House.
3. K.P.Roy : Statistical Techniques in commerce and economics.
4. Munavalli, R.S. : Basic Statistics.
5. Goon Gupta & Das Gupta – Fundamentals Statistics Vol.-I & II
6. R.G.D. Allen : Statistics for Economist.
7. Asthana and Srinivatsava : Applied Statistics of India.
8. Gani S.G. – Intro to Stat & Computer Vol-II.

**3. Kannada (Optional)**

ಎ. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮ ಕನ್ನಡ ಪ್ರಥಮ ಪತ್ರಿಕೆ

1. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪ್ರಥಮ ಪತ್ರಿಕೆಯಲ್ಲಿ ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ಉಚಿತ ವಿಷಯದ ಸಾಹಿತ್ಯವನ್ನು ಸ್ವಲ್ಪವಾಗಿ ಪರಿಚಯಿಸುವುದು ಮತ್ತು ಭಾಷೆಯ ಪ್ರಯೋಗಗಳ ಕಲೆಯ ಸಾಹಿತ್ಯವನ್ನೂ ಕುರಿತು ವಿಶೇಷವಾಗಿ ಅಧ್ಯಯನಿಸುವುದು.
2. ಈ ಪತ್ರಿಕೆಗೆ ಒಟ್ಟು ಪಾಠದ ಅವಧಿ 80 ಗಂಟೆಗಳಾಗಿರುತ್ತದೆ. ಪಾಠಕ್ಕೆ 05 ಗಂಟೆಗಳ ಬೋಧನೆಯನ್ನು ನಿಗದಿಪಡಿಸಲಾಗಿದೆ. ಒಟ್ಟು ಅಂಕಗಳು 100 ಅಂತರಕ ಗುಣಾಂಕಕ್ಕೆ 20 ಅಂಕಗಳು (ಪಾಠದಾಗೆ 04, ಪೂರಕ ಕವಿ ಪಾಠದಾಗೆ 06, ಐದನೆಯ ತಿಂ ಪಾಠದಾಗೆ 06, ನಿರೀಕ್ಷಿತ ಕಾರ್ಯಕ್ಕೆ 04 ಅಂಕಗಳು) ಪಾಠದ ಫಲಿತ ಪತ್ರಿಕೆಗೆ 80 ಅಂಕಗಳು.

**ಪಠ್ಯಕ್ರಮ**

1. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮ (60 ಗಂಟೆಗಳ) 60 ಗಂಟೆಗಳ ಕಾಲ  
 a) ಪರಿಚಯ - ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 b) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 c) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 d) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 e) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 f) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 g) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 h) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 i) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)  
 j) ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು (10 ಗಂಟೆಗಳ)

2. ಕನ್ನಡದ ಸಂಸ್ಕೃತಿ : 100 ವರ್ಷದ ಸಂಸ್ಕೃತಿ - (20 ಅಂಕಗಳು) (20 ಗಂಟೆಗಳ ಕಾಲ)

**ಪಠ್ಯಕ್ರಮದ ಸ್ತಂಭಗಳು:**

1. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು
2. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು
3. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು
4. ಐದನೆಯ ಸೆಮಿಸ್ಟರ್ ಪಠ್ಯಕ್ರಮದ ಉದ್ದೇಶ ಮತ್ತು ಉದ್ದೇಶಗಳು



## Economics (Optional)

### B.A. V SEMESTER

#### Subject: MACRO ECONOMICS – PAPER-I (Compulsory)

(Teaching Hrs. 5 per week)

#### Objectives:

1. To clarify the concepts of Macro Economics.
2. To understand the concepts of employment.
3. To know the economic fluctuations.

Unit-I	Meaning of Macro Economics, National Income and Social Accounting—Concepts of National Income, Measurement of national income—Difficulties in Estimating National Income—Uses of National Income Accounting.	12hrs
Unit-II	Employment concepts, Classical Theory of Income and Employment-Say's Law of Market-A.C Pigou's Re-formulation.	10 hrs
Unit-III	– Keynesian Theory of Employment-Concepts of Aggregate Demand and Supply functions: Effective Demand and its Determinants, The Consumption Function-Average and Marginal Propensity to Consume-Factors affecting Consumption Function-The Investment Function-Marginal Efficiency of Capital-Rate of Interest.	15 hrs
Unit-IV	The Theory of Multiplier & Acceleration Principle-Meaning-Working and Limitations, Leverage effect.(Super Multiplier) 12 Hrs	12hrs
Unit-V	Trade Cycles-Meaning-Features and Phases-Theories of Trade Cycles-Hawtrey's- Keynes' and Schumpeter's Theories-Control of Trade Cycles.	12hrs

Reference Books : 1. M. L. Seth : Macro Economics-2008: Lakshmi Narain Agarwal, Educational Publishers, Agra 2. M. L. Jhingan : Macro Economics 1989: Konark Publishers Pvt. Ltd., New Delhi 3. D. M. Mithani : Macro Economics: Himalaya Published House, Mumbai 4. K. K. Dewett : Advanced Economic Theory-2066

## B.A. V SEMESTER

### Subject: ECONOMICS OF DEVELOPMENT - PAPER-II (Optional)

(Teaching Hrs. 5 per week)

#### Objectives:

1. To clarify the concepts of economic development.
2. To understand the various theories of development.
3. To provide a suitable model for India's economic development.

#### Unit I Economic Development and economic Growth :

Meaning, Determinants of Economic Development -Economic and Non- Economic factors, Human development Indices-PQLI, HDI.

#### Unit II Obstacles to Economic Development:

Vicious circle of Poverty, low rate of capital formation, socio-cultural constraints, Agricultural constraint, Human Resources constraint, Foreign Exchange constraint, - Sustainable Development

#### Unit III Theories of Economic Development :

Adam Smith's Theory,  
Ricardian Theory,  
Karl Marx Theory

#### Unit IV Theories of Economic Growth

Rostow's stages of Economic Growth  
The Doctrine of Balanced & Unbalanced Growth

#### Unit V Measures for Economic Development:

Capital formation & Economic Development,  
Role of Agriculture and Industry in Economic Development,  
Human Resources and Economic Development,  
Foreign Direct Investment and Economic Development

#### Reference Books :

1. The Economics of development- M.L.Hingon
2. Theories and Models of Economic Development & Growth-Dr D.S.Shrivastav
3. A History of Economic Thought- Lakanathan
4. A History of Economic Thought- Eric Roll
5. Economics of Development- K.D.Basav
6. Abhivridhi Arthshasatra (Kannada)- K.Shivachitta

10. Sachdeva, D.R: Social Welfare Administration in India, Kitab Mahal, Allahabad, 1988.
11. Sankaran and Rodrigues: Handbook for the Management of Voluntary Organizations, Alpha Publications, Madras, 1983.
12. Skidmore, R.A: Social Work Administration, New Jersey, Prentice-Hall, 1983.
13. Weiner, M: Human Service Management, Illinois, The Dorsey Press, 1982.
14. Young, Pat: Mastering Social Welfare, Macmillan Master Series, Macmillan Education Ltd., London, 1985.

#### 5.4: Social Work Practicum

## GROUP- D

### 8. Agricultural Marketing (Optional)

BA - V -Semester

Subject: AGRICULTURAL MARKETING

PAPER-5.1 – COMMODITY MARKET AND FUTURE TRADING

Teaching 5hrs per week

Marks: 100 (80 theory+20 Internal Assessments)

- Objectives:** 1. To provide knowledge of Agricultural Marketing concepts and key issues  
2. To get applied knowledge of Agricultural Marketing.

#### Unit-I Produce Exchange:

Meaning and characteristics of produce exchange- functions, organization and management, types of transactions- cash transactions, future contracts, hedging and speculation.

10hrs

#### Unit-II Marketing Risk-

Meaning, kinds, methods of minimizing risk- reduction of risk- shifting and dividing of risks.

10hrs

#### Unit-III Marketable surplus and Marketed Surplus:

Meaning of Marketable surplus-factors affecting the marketable Surplus. Distinction between marketable surplus and Marketed surplus- Estimation of marketable surplus.

13hrs

#### Unit-IV Marketing Cost and Margins:

Meaning of marketing Cost and Margins- factors affecting the marketing cost and Margins- remedial measures. Price spread-concepts of price Spread. Importance of the study of price spread.

15hrs





#### Unit-V Marketing Information System:

Meaning of Marketing information & its importance, Types of marketing information system, sources of collecting information, Problems and remedial measures, Use of IT in Agricultural, Farmers call centre.

12hrs

#### PRACTICALS (4hrs per week)

9. Marks-External

10. Marks-

Internal Total -50

Marks

Study and use of Agricultural Media for generation of market information.  
Demonstration of E-trading  
Estimation of Marketing cost and Price spread  
Estimation of marketed and marketable surplus.  
Visit to insurance agency  
Visit to Food Corporation of India  
visit to Agriculture Export Zones (AEZ's)

#### Books for Reference:

1. Agricultural Marketing in India By Acharya and N.L.Agarwal.
2. Principles and Practices of Marketing By C.B.Memoria and R.L.Joshi
3. Agricultural Marketing By H.R.Krishnagouda
4. Marketing of Agricultural Produce in India By A.P.Gupta
5. Modern Marketing by K.D.Basva.
6. Modern Marketing by C.B.Memoria.
7. Agricultural marketing in India by S.C.Jain.

#### Journals and Magazines:

1. Indian Journal of Marketing
2. Indian Journal of Agricultural Marketing
3. Yojana
4. Kurakhatrya

#### Websites:

11. [www.agricoop.nic.in](http://www.agricoop.nic.in) (Ministry of agriculture and cooperation, Govt. of India)
12. [www.mofpi.nic.in](http://www.mofpi.nic.in) (Ministry of Food Processing industries, Govt. of India)
13. [www.krishimaratahavahini.kar.nic.in](http://www.krishimaratahavahini.kar.nic.in) (Dept of Agril.Mkt, Govt of Karnataka)
14. [www.agmarknet.nic.in](http://www.agmarknet.nic.in) (Agril.Mkt Research & Information Network)
15. [www.fao.org](http://www.fao.org) (Food and Agril. Organization)
16. [www.ksemb.gov.in](http://www.ksemb.gov.in) (Karnatak State Agril.Mkt Board)



**BA V- Semester**

**Subject: AGRICULTURAL MARKETING**

**PAPER-5.2 - AGRICULTURAL ECONOMICS**

**Teaching 5hrs per week**

**Marks: 100 (80 theory+20 Internal Assessments)**

**Objectives:** To get basic knowledge of Agricultural Economics

**Unit-I Agriculture Economics:**

Meaning, nature, scope & importance of Agricultural economics, Role of Agriculture in Indian economy, Causes of low productivity, Measures to increase the productivity.

10hrs

**Unit-II Institutional & Technological changes in Indian agriculture:**

Basic problems of Indian agriculture, Land reforms, need & scope for land reforms, Abolition of intermediaries, Tenancy reforms.

13hrs

**Unit-III Irrigation & Cropping Pattern:**

Meaning of irrigation and Types of irrigation, Advantages and disadvantages of irrigation, Cropping pattern- Meaning, characteristics & factors affecting The cropping pattern.

15hrs

**Unit-IV Food Problem in India:**

Nature & causes for food problem, Remedial measures to solve food problem, Green revolution, meaning & causes of green Revolution, Achievements & weaknesses of green revolution.

12hrs

**Unit-V Food Security in India:**

Concept of food security, food self-sufficiency & food security, Public Distribution system & its impact on poverty, Policy options for reforms of public distribution system.

10hrs

**PRACTICALS (4hrs per week)**

Marks-External

Marks-Internal

Total -50 Marks



## GROUP – E

### 1. History (Optional)

**History & Archaeology**  
**B.A.V Semester**  
**History of India [1707 to 1857]**  
**Paper - I (Compulsory)**

One Paper carrying 80 marks and 3 hours duration.  
(Teaching hours :5 hours per week - 16 weeks x 5 = 80 hours)

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<b>UNIT – I:</b>	<b>18Hr</b>
A. The Role of Peshwas. Third Battle of Panipat. B. Anglo- French Conflicts. C. Rise of British power under Robert Clive and his Policy.	<b>8</b>
<b>UNIT – II:</b>	<b>20 Hrs</b>
A. Expansion and consolidation of British Power under warren Hastings. B. Lord Cornwallis and his Administration. C. Lord Wellesley and his subsidiary Alliance.	
<b>UNIT – III:</b>	<b>16 Hrs</b>
A. Lord Marqués of Hastings : his Domestic and Foreign Policy. B. Lord William Bentick : His reforms. C. Land revenue reforms of the British- Zamindari, Ryotwari, Mahalwari,	
<b>UNIT - IV:</b>	<b>20 Hrs</b>
A. Lord Dalhouse: His Expansion of power, Doctrine of lapse and Reforms.	



- B. The Great revolt of 1857- Nature, causes, course and effects.
- C. Queens proclamation and its significance.

**UNIT - V:**

**06 Hrs**

Map Topics [one question compulsory]

- A. Places where the great revolt of 1857 occurred.
- B. Places of Historical Importance
  - 1) Calicut 2) Surat 3) Pondicherry 4) Calcutta 5) Plassey
  - 6) Buxar 7) Arcot 8) Trichanpally 9) Wandiwash 10) Banaras



Lucknow 12) Shrirangapattan 13) Bession 14) Saibhai  
Lahore 16) Madras 17) Bombay 18) Agra 19) Thane  
Allahabad.

### Books for Reference

1. Modern India by: K.L. Khurana
2. A new look at Modern Indian History. By: B.L. Grover, Alka Mehta
3. Modern India History by : V.D. Mahajan
4. Modern India by: L.P. Sharma
5. D.A.P. Agra, E.M.A., U.A.P., U.C.A.
6. D.A.P. Agra, E.M.A., U.A.P., U.C.A.
7. Agra, E.M.A., U.A.P., U.C.A.
8. D.A.P. Agra, E.M.A., U.A.P., U.C.A.

## History & Archaeology

### BA V Semester, Paper II

#### Modern Europe (1500 AD - 1914 AD)

One Paper carrying 80 marks and 3 hours duration.

(Teaching hours :5 hours per week - 16 weeks x 5 = 80 hours)

#### UNIT-I

25 hrs.

1. The Geographical Discoveries - Causes, Discoveries and Results
2. Renaissance - Meaning, Causes, Features and Renaissance in the field of art, literature and science
3. Reformation Movement - Causes - Martin Luther, Counter Reformation and Results

#### UNIT-II

25 hrs.

1. French Revolution: Causes, Course & Results
2. Napoleonic Era - Reforms & Conquests.
3. Metternich Era - Vienna Settlement, Concert of Europe

#### UNIT-III

14hrs.

1. 1830 and 1848 Revolutions of France & Europe
2. Second French Republic (1848-1852)
3. Second French Empire under Napoleon-III (1852-1870)

#### UNIT-IV

15 hrs.

1. Unification of Italy
2. Unification of Germany
3. German Empire (1871-1914) Bismark & Kaiser William II



**UNIT-V**

06 hrs.

Map Topics (One question compulsory)  
Napoleonic conquest

Places of Historical Importance

1. Paris
2. Venetia
3. Vienna
4. London
5. Aix-La-Chappel
6. Cape of Good Hope
7. Berlin
8. Frankfort
9. Elba
10. Rome
11. Corsica
12. Moscow
13. Piedmont
14. Madrid
15. Prague
16. Constantinople
17. Milan
18. Sadowa
19. Sedan
20. Alsace-Lorraine

**Books of reference :**

- History of Modern Europe: Raghavendra Prabhu  
Text book in European History, Delhi : Raghbir Dayal  
Europe since Napoleon, Penguin, 1978 ; David Thompson  
History of Modern Europe : C.D. Hazen : S. Chand  
Publication, New Delhi.  
Modern Europe- K L Khurana  
Modern Europe - V D Mahajan  
D.A.P. A.M. & E. Z. (1789-1960) . . . . .  
D.A.P. A.M. & E. P. U.C.A.  
D.A.P. A.M. & E. W. S.C.  
E.W. A. : W. U.A. A.M. : A.A. A.V.

**History & Archaeology****B.A V Semester****History & Culture of Karnataka (From Early Times to 1336 A.D) Paper - II**

One Paper carrying 80 marks and 3 hours duration.

(Teaching hours :5 hours per week - 16 weeks x 5 = 80 hours)

**Unit - I: 16 hrs.**

1. Sources: Literary & Archaeological.
2. Geographical features of Karnataka.
3. Karnataka under Mauryas

**Unit - II: 15 hrs**

1. Karnataka under Shatavahanas
2. The Gangas of Talakad
3. The Kadambas of Banavasi

**Unit - III: 23 hrs**

1. The Chalukyas of Badami: Pulikeshi II, Vikramaditya II; & Their Cultural Contributions.
2. The Rashtrakutas of Malkhed: Govinda III, Amoghavarsha &



Poetry:-

Paper-II Prescribed textbook

“Diwan-E-Hafiz” by Hafiz Shirazi

Edby. M.Q.Sajad.

Pub:-Sabrang Kitab Ghar New Delhi-6.

Selected Portion only from

Radeef-Se, Jeem, Cheem, Hai, Khai & Daal-First 15 gazals only.

#### 4. Political Science (Optional)

**B.A. Semester – V**  
**Compulsory Paper-I**  
**Public Administration**  
**80 Marks 5 hrs per week**

**Course Rationale:**

*This paper is an introductory course in Public Administration. The effort is to introduce students to the basic principles, key administrative thinkers, and the main instrument-  
bureaucracy/civil service – of administration.*

**Chapter- 1 Introduction,**

- a) **Meaning, Nature and Scope of Public Administration**
- b) **New Public Administration**
- c) **Public and Private Administration**

**10 hours**

**Chapter-2 Principles of Organisation**

- a) **Hierarchy, Span of Control, Delegation of Authority,**
- b) **Line and staff Agency**

**10 hours**

**Chapter-3 Personnel Administration**

- a) **Recruitment, Training, Promotion & Retirement.**
- b) **Discipline and morale**

**12 hours**

**Chapter-4 Financial Administration**



**Budget-Meaning,Principles,preparation and enactment of BudgetGlobalisation and Public Administration, , Perspective of public administration**

**10 hours**

### **Chapter-5 Contemporary issues in Public Administration**

**a)Development Administration b) Good Governance c)E-Governance d)Right to Information Act,e)PPP-Public Private Partnership and Administration**

**12 hours**

### **Books Reference**

- 1.M.P.Sharma B.L. Sadana Public Administration in Theory and Practice, Kitab Mahal, New Delhi,2005.
- 2.Raymond W.Cox Susan J.BuckBetty N. Morgan Public Administration in Theory and Practice, Pearson Publication, New Delhi, 2004
- 3.Nicholas Henry Public Administration and Public Affairs, Prentice Hall of India, New Delhi, 2003
- 4.R.K.AroraC.V.Raghavulu values in Administration, Associated Publishing House, New Delhi, 1989
- 5.VishnooBhagwanVidyaBhushan Public Administration, S.Chand& Co., New Delhi, 2005
- 6.Avasthi&Maheshwari Public Administration, Lakshmi NarainAgarwal, Agra, 2004
- 7.Mohit Bhattacharya Public Administration : Structure, Process and Behaviour, World Press, Calcutta, 1987
- 8.Ram Avtar Sharma Public Administration Today, Shree Publishers & Distributers, New Delhi, 2005
- 9.Avasthi&Avasthi Public Administration, Lakshmi NarainAgarwal, Agra, 2003
- 10.Fadia&Fadia Public Administration Theries and Concepts, SahityaBhavan Publications, Agra, 2005
11. A.R. Tyagi Public Administration, Principles & Practice, Atma Ram & Sons, Delhi, 2001
- 12.C.P. Bhambhri Public Administration, Jai PrakashNath& co., Meerut, 2000
- 13.Mali Muddanna - Public Administration.
- 14.N.B.Patil - Public Administration, ArunPrakashanBijapur. (Kannada)
- 15.G.B.Sheelavantar - Public Administration, VidyanidhiPrakashanGadag.(Kannada)
- 16.M.S.Patil - Public Administration, PratibhaPrakashanTalikota.(Kannada)
- 17.M.S.Patil - Public Administration, Bharat PrakashanDharwad. (Kannada)
- 18.H.T.Ramakrishna - Public Administration, LalitPrakashan Mysore. (Kannada)





## 5. Sociology (Optional)

With effect from 2017-18 (2015-16 scheme)

B. A. Fifth Semester

Compulsory Paper- 5.1

### STUDY OF INDIAN SOCIETY

#### Objectives of the Paper:

2. Make the students to understand the Philosophical Bases of Indian Society.
  3. To make aware the students about the changing aspects of Indian Society.
  4. To understand the changing aspects of Indian Stratification.
- 

#### Unit- I Introduction

12 Hours

1. Features of Indian Society
2. Philosophical Bases of Indian Society-  
Varnasharma, Purusharthas and Samskaras
3. Factors of Continuity and Change

#### Unit- II Marriages in India

12 Hours

1. Marriage among Hindus, Muslims, and Christians
2. Divorce
3. Recent Changes in Marriage

#### Unit- III Family in India

12 Hours

1. Hindu Joint Family- Meaning and Features
2. Types of Family (Matriarchal and Patriarchal)
3. Changing aspects on Indian Family

#### Unit- IV Caste System in India

12 Hours

1. Meaning and Traditional Features
2. Merits and De-merits of Caste System
3. Changing aspects of Caste



**Unit-V Tribal Community in India**

**12 Hours**

1. Meaning and Features
  2. Distribution of Tribals
  3. Settlement Patterns
  4. Recent Changes in Tribal Community
- 

**References:**

1. Beteille Andre (1992): Backward classes in contemporary India. New Delhi: OUP
2. Berreman, G.D. (1979): Caste and other Inequalities: Essays in Inequality. Meerut: Folklore Institute.
3. Indene Ronald (1990): Imaging India. Oxford: Brasil Blackward.
4. Kothari Rajani (Ed.) (1973) : Caste in Indian Politics
5. Satya Murthy T.V. (1996): Religion, Caste, Gender, and Culture in Contemporary India. New Delhi: OUP
6. Dube, S.C. (1977): Tribal Heritage of India. New Delhi: Vikas Publication.
7. Hasnain, N. (1983): Tribes in India. Harman Publications, New Delhi.
8. Chaudhuri Buddhadeb (1991): Tribal Development in India. New Delhi: Inter India Publications.
9. Bose, N.K. (1967): Culture and Society in India. Bombay: Asia Publishing House.
10. Karve, Irawati. (1961): Hindu Society: An Interpretation. Poona: Deccan College.
11. Mandelbaum (1970): Society in India Bombay, Popular Prakashan.
12. Mulgund, I.C. (2008): Readings in Indian Sociology. Shrusti Prakashan, Dharwad.
13. Srinivas, M.N. (1980) India: Social Structure. New Delhi: Hindustan Publishing Cooperation.



### Books for reference

History and Tourism (Kan. and Eng. Version) : K.S  
Vijaylakmi IGNOU study Material (Bachelor in Tourism  
Studies) Bahariya Pravasodiyama : Dr.S.N Shivarudra  
Swami Tourism products in India : T.C Gupta  
Baratiya Pravasodiyama Adhyana, Dr. S.P Surebankar and  
Prof. C.M Munnoli

### Journalism & Mass Communication (Optional )

#### B.A - SEMESTER – V

Teaching Hours : 5 Hours per Week

#### Paper I: Photography and Cinema

Teaching: Theory cum practical: 4 hours per week Total: 6 Q hours

Examination theory 80 marks

1. Nature of photography – Evolution. Of Photography –Visual language –camera –  
Parts of Camera – Types of Camera and films. (12 Hrs)
2. Types of lenses and filters – Focal length – Depth of field lighting photographs –  
Composing picture – Digital – Photography – Film processing and printing –  
Photojournalism – News Photographs – Editing photography – writing captions. (12 Hrs)
3. Introduction to Cinema language of cinema-film techniques –Camera as a tool  
Elements of cinema-Lighting-Film appreciation. (12 Hrs)
4. Growth and development of cinema in India-D.G. Phalke-Cinema after independence -  
Current status of Indian film industry. (12 Hrs)
5. Contemporary Kannada cinema – A study of two prominent Kannada film directors  
and their works-Film censorship in India. (12 Hrs)



**Reference Books:**

1. Photojournalism, the Visual Approach-Frank. P. Hay
2. Photojournalism Manual – Bergin.
3. Press Photography – Rhode and Meneal
4. Understanding the film – Jan Bone Ron Johnson
5. The Art of watching films –Joseph Boggs
6. Our Films and their Films – Satyajit Ray

Four assignments to be submitted for the ward of 1A marks (10)

1. One photo feature of 15 Black & White photographs
2. One photo feature of 15 colour photographs
3. Two films reviews on the films released during the current year (600 words each)

**Paper-II: Radio Journalism:**

Teaching: Theory cum practical: 4hours per week Total: 60 hours.

Examination theory 80 marks 3hrs duration 20 IA

1. Radio as a communication medium – Characteristics of broadcasting – Radio station and its organizational pattern – programming – engineering – News unit and Marketing. (12 Hrs)
2. Equipments used in broadcasting – Types of mikes – Recording equipments-Tape records, decks and portable records – Outdoor coverage – Various types of tapes digital sound technology.
3. Formats of radio programmes – Talks, interviews, group discussions and dramas – programmes for Children, Women, Youth, Health and – Phone in programmes. (12rs)
4. Scripting for various radio programmes – Editing techniques – Mixing and Dubbing – Sounds effects –Sound library – Researching for programmes – Tape Library. (11 rs)
5. Current status of AIR – Vivid Bharati – New services – Commercials –External Services-Composition and power of Parsar Bharati-Private I'M radio channels. (12 Hrs)



## 7. English (Optional)

**Detailed Syllabus for BA  
(With effect from 2018-19 onwards)  
Semester – VI: Optional English Paper I  
**Study of English Language and English Phonetics**  
**Teaching Hours: 5 Hours per week****

### Section – A: English Language (50 Marks)

1. Characteristic Features of English language
2. Landmarks in the History of English Language
3. Vocabulary: Greek, French and Latin elements in English language
4. Makers of English Language: Shakespeare, Milton and the Bible Translators
5. Development and use of Dictionaries
6. English as Global Language
7. Techniques of teaching Language Skills: LSRW
8. Modern Approaches to ELT

### Section – B: Introduction to the study of English Phonetics (30 Marks)

1. Classification and Description of English speech sounds
2. Transcription of words
3. Marking Stress (Accent)

### Suggested Readings

1. C. L. Wren. *History of English Language*
2. F. T. Wood. *An Outline History of English Language*
3. T. Balasubramanian. *A Textbook of English Phonetics for Indian Students*. MacMillan, 2011
4. T. Balasubramanian. *English Phonetics for Indian Students – A Workbook*. MacMillan, 2011
5. Bansal and Harrison. *Spoken English*

### Pattern of Question Paper

(80 Marks paper of three hours and 20 Marks for I.A.)

- |                                                       |           |
|-------------------------------------------------------|-----------|
| 1) Objective type questions based on English language | 10X1=10   |
| 2) Essay type question (One out of Two)               | 10        |
| 3) Essay type question (One out of Two)               | 10        |
| 4) Essay type question (One out of Two)               | 10        |
| 5) Essay type question (One out of Two)               | 10        |
| 6) Short Notes on Phonetics (Two out of Four)         | 2X5=10    |
| 7) Word Transcription                                 | 10X1=10   |
| 8) Word Stress                                        | 10X1=10   |
|                                                       | <b>80</b> |



**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**Detailed Syllabus for BA**

**(With effect from 2018-19 onwards)**

**Semester – VI: Optional English Paper II**

**Study of Classics and Modern Literary Theories**

**Teaching Hours: 5 Hours per week**

**Section – A: Classics - 50 Marks**

1. Julius Caesar – William Shakespeare
2. Unto this Last – John Ruskin

**Section – B: Literary Theories - 10 Marks**

1. Eco-Criticism
2. Feminist Theories
3. Reader's Response Theory
4. New Historicism
5. Resistance Theory

**Section – C: Introduction to Literary Theories - 20 Marks**

1. Marxist Theory
2. Post Colonialism
3. Structuralism
4. Post Structuralism
5. Deconstruction
6. Modernism
7. Post Modernism
8. Intertextuality
9. Psycho-analysis
10. Orientalism

**Suggested Readings**

- T. S. Eliot- What is classic (from On Poets and Poetry)
- A. C. Bradley- 'Sublime' from Oxford Lectures on Poetry.
- Jeremy Hawthorn A Glossary of Contemporary Literary Theory, London: Hodder Publication, 4<sup>th</sup> Ed. 2000.
- Peter Barry. Introduction to Literary Theory
- Buchanan. Ian. A Dictionary of Critical Theory. New York: Oxford University Press, 2010.
- Cuddon, J. A. The Penguin Dictionary of Literary Terms and Literary Theory (4th Edition). London and New York: Penguin, 2000.
- Culler, Jonathan. Literary Theory: A Very Short Introduction. London, Oxford University Press: 2000.



## Kannada (Optional)

ಬಿ.ಎ. ಆರನೆಯ ಸೆಮಿಸ್ಟರ್ ಬಾಹ್ಯ ಕನ್ನಡ ಪ್ರಥಮ ಪತ್ರಿಕೆ

W.E.F-2018-19

೧. ಆರನೆಯ ಸೆಮಿಸ್ಟರ್ ಪ್ರಥಮ ಪತ್ರಿಕೆಯಲ್ಲಿ ಕನ್ನಡ ನಾಡಿನ ಸಾಂಸ್ಕೃತಿಕ ಚರಿತ್ರೆಯನ್ನು ಕುರಿತು ಸ್ವಲ್ಪವಾಗಿ ಪರಿಚಯಿಸುವುದು.
೨. ಈ ಪತ್ರಿಕೆಗೆ ಒಟ್ಟು ಪಾಠದ ಅವಧಿ ೮೦ ಗಂಟೆಗಳಾಗಿರುತ್ತದೆ. ವಾರಕ್ಕೆ ೦೫ ಗಂಟೆಗಳ ಬೋಧನೆಯನ್ನು ನೀಡಬಹುದಾಗಿದೆ. ಒಟ್ಟು ಅಂಕಗಳು ೧೦೦. ಅಂತರಿಕ ಸುಣಾಂಕಕ್ಕೆ ೨೦ ಅಂಕಗಳು (ಪಾಠದಾತನಿಗೆ ೦೪, ಮೊದಲ ಕಡು ಪರೀಕ್ಷೆಗೆ ೦೬, ಎರಡನೆಯ ಕಡು ಪರೀಕ್ಷೆಗೆ ೦೬, ಸಾಂಸ್ಕೃತಿಕ ಕರ್ನಾಟಕ ಪ್ರವಾಸ ಮತ್ತು ಪ್ರವಾಸ ವರದಿ ಸಲ್ಲಿಕೆಗೆ ೦೪ ಅಂಕಗಳು) ಹಾಗೂ ಫಿಯರಿ ಪತ್ರಿಕೆಗೆ ೮೦ ಅಂಕಗಳು.

### ಪಠ್ಯಕ್ರಮ

೧. ಕನ್ನಡ ನಾಡಿನ ಸಾಂಸ್ಕೃತಿಕ ಚರಿತ್ರೆ (೬೦ ಅಂಕಗಳು) ೬೦ ಗಂಟೆಗಳ ಪಾಠ
  - ಎ. ಕನ್ನಡ ನಾಡಿನ ರಾಜಕೀಯ ಚರಿತ್ರೆ- ಕರವು, ಗಂಗ, ಚಾಲುಕ್ಯ, ಹೊಯ್ಸಳ, ವಿಜಯನಗರದ ಆರಸರು, ಬಹಮನಿ ಸುಲ್ತಾನರು, ಮೈಸೂರು ಒಡೆಯರು, ಬ್ರಿಟಿಷರ ಆಡಳಿತದಲ್ಲಿ ಕರ್ನಾಟಕ (ಮುಖ್ಯ ಅಂಕಗಳು)
  - ಬಿ. ಪ್ರವಾಸದರ್ಶನ, ಪೂಜೆ, ಪಟ್ಟದಕಲ್ಲು, ಬೆಲೂರು, ಹಳಬೀರು, ಪಂಪ ವಿಜಯನಗರದ ವಾಸ್ತು ಕಲೆಗಳು (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)
  ೨. ಕರ್ನಾಟಕದ ಧರ್ಮಗಳು - ಬೌದ್ಧ, ಜೈನ, ಶೈವ-ವಿರಕ್ತ, ಇಸ್ಲಾಂ, ಕ್ರೈಸ್ತ (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)
  ೩. ಕರ್ನಾಟಕ ಸಂಗೀತ, ಭರತನ ನಾಟ್ಯ ಚಿತ್ರಣ (ಪತ್ತು ಅಂಕಗಳು)

### ಪರಮಾತ್ಮನ ಗ್ರಂಥಗಳು

೧. ಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ ಸಮೀಕ್ಷೆ : ಡಾ. ಎಚ್. ತಿಪ್ಪೇಯಪ್ಪಯ್ಯಯ್ಯ
೨. ಕರ್ನಾಟಕದ ಪರಂಪರೆ ಭಾಗ-೧ ಹಾಗೂ ಭಾಗ-೨ ಕನ್ನಡ ಮತ್ತು ಸಂಸ್ಕೃತಿ ಇಲಾಖೆ ಪ್ರಕಟಣೆ  
(ಸೂಚನೆ : ಬಾಹ್ಯ ಕನ್ನಡ ವಿಷಯದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಸೆಮಿಸ್ಟರ್ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅಧ್ಯಾಪಕರು ಪ್ರವಾಸವನ್ನು ಎರ್ಪಡಿಸಿ ಅವರಿಂದ ಪಠನೆಯನ್ನು ಬರೆದುಕೊಡುವ ನಿಯೋಜಿತ ಕಾರ್ಯವನ್ನು ನೀಡುವುದು)





ರಾಜ್ಯ ಚನ್ನಮ್ಮ ವಿಶ್ವವಿದ್ಯಾಲಯ  
ಶಾಸ್ತ್ರೀಯ ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ಸಂಸ್ಥೆ

ಬಿ. ಎ. ಆರನೆಯ ಸೆಮಿಸ್ಟರ್ ಬಾಹ್ಯ ಕನ್ನಡ ದ್ವಿತೀಯ ಪತ್ರಿಕೆ

1. ಆರನೆಯ ಸೆಮಿಸ್ಟರ್ ದ್ವಿತೀಯ ಪತ್ರಿಕೆಯಲ್ಲಿ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಕೆಲವು ಪ್ರಮುಖ ಕೃತಿಗಳನ್ನು ಓದಿಸುವ ಉದ್ದೇಶವನ್ನು ಹೊಂದಲಾಗಿದೆ.
2. ಈ ಪತ್ರಿಕೆಗೆ ಒಟ್ಟು ಪಾಠದ ಅವಧಿ ೮೦ ಗಂಟೆಗಳಾಗಿರುತ್ತದೆ. ಪಾಠಕ್ಕೆ ೦೫ ಗಂಟೆಗಳ ಬೇರೂರನೆಯನ್ನು ನಿಗದಿಪಡಿಸಲಾಗಿದೆ. ಒಟ್ಟು ಅಂಕಗಳು ೧೦೦ ಆಂತರಿಕ ಗುಣಾಂಕಕ್ಕೆ ೨೦ ಅಂಕಗಳು (ಪಾಠರೀತಿಗೆ ೦೪, ಮೊದಲ ಕರು ಪರೀಕ್ಷೆಗೆ ೦೬, ಎರಡನೆಯ ಕರು ಪರೀಕ್ಷೆಗೆ ೦೬, ನಿಯೋಜಿತ ಕಾರ್ಯಕ್ಕೆ ೦೪ ಅಂಕಗಳು) ಪಾಗೂ ಥಿಯರಿ ಪತ್ರಿಕೆಗೆ ೮೦ ಅಂಕಗಳು.

ಪಠ್ಯಕ್ರಮ

೧. ಕನ್ನಡದ ಪ್ರಮುಖ ಪಠ್ಯಗಳು (೬೦ ಅಂಕಗಳು) ೬೦ ಗಂಟೆಗಳ ಪಾಠ
  - ಎ. ಸಂಸ್ಕಾರ - ಡಾ. ಯು ಆರ್ ಅನಂತಮೂರ್ತಿ (ಕಾದಂಬರಿ) (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)
  - ಬಿ. ಶಿವರಾತ್ರಿ - ಡಾ. ಚಂದ್ರಕೇವರ ಕಂಬಾರ (ಸಾಹಿತ್ಯ) (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)
  - ಸಿ. ಪಂಪಾಯಾತ್ರೆ - ವಿ. ಸೀತಾರಾಮಯ್ಯ (ಪ್ರವಾಸ ಕಥನ) (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)
  - ಡಿ. ಸರೋಜದತ್ತ ಸಿರಿಗನ್ನಡಿಯಲ್ಲಿ - ಕುವೆಂಪು (ವಿಮರ್ಶೆ) (ಇಪ್ಪತ್ತು ಅಂಕಗಳು)





### Books for Reference:

Rural Development by Vasant Desai  
Rural Development in India by B.R. Krishnegowda  
Indian Economics by A.N. Agarwal  
Indian Economy by K.P.M. Sundram & Rudra Datt  
Rural Economy of India by A.N. Agarwal & Kundanlal

### Journals and Magazines :

Yojana  
Kurukshetra  
Journal of Rural Development  
Journal of Rural & community Development  
Journal of Agricultural, Extension & Rl. Devpt.  
The International Journal for Rural Development.

### Websites:

[www.panchayat.nic.in](http://www.panchayat.nic.in)  
[www.agricoop.nic.in](http://www.agricoop.nic.in) Ministry of Agriculture  
[www.rural.nic.in](http://www.rural.nic.in) Ministry of Rural Devept.  
[www.ssi.nic.in](http://www.ssi.nic.in) Ministry of Small scale industries  
[www.mospi.nic.in](http://www.mospi.nic.in) Ministry of Statistics & programme implementation  
[www.dhi.nic.in](http://www.dhi.nic.in) Ministry of Heavy industry & public enterprises.  
[www.planningcommission.nic.in](http://www.planningcommission.nic.in)  
<http://rdpr.kar.nic.in> Govt. of Karnataka, Rural Devpt. & panchayat raj  
<http://des.kar.nic.in> Govt. of Karnataka, Directorate of Economics & Statistics.  
<http://sahakara.kar.gov.in> Govt. of Karnataka, Dept of co-operation  
<http://emptrg.karn.nic.in> Govt. of Karnataka, Directorate of employment & training.



## Economics (Optional)

### B.A. VI SEMESTER

#### Subject: PUBLIC FINANCE AND FISCAL POLICY PAPER I (Compulsory) (Teaching Hrs. 5 per week)

##### Objectives:

To clarify the concepts of Public Finance and Fiscal Policy.

To acquaint with tools of public finance and fiscal policy.

##### Unit –I: Introduction to Public Finance

Meaning and Scope of Public Finance. Distinction between Public Finance and Private Finance. Principle of Maximum Social Advantage.

##### Unit-II: Public Revenue

Sources of Public Revenue –Taxation –Cannons of taxation –characteristics of good tax system – Impact, Incidence, Shifting of tax –Types of Taxation– Progressive, Regressive, Proportional –Direct and Indirect taxes –Merits and Demerits. Effects of tax on Production and Distribution –Taxable Capacity – Meaning and determinants.

##### Unit-III: Public Expenditure

Meaning and Types –Principles of public expenditure. Causes for increase in Public Expenditure – Effects of Public Expenditure on Production and Distribution.

##### Unit-IV: Public Debt

Meaning, Purpose and sources of Public Borrowing. Types of Public Debt, burden of Public debt- Methods of repayment.



#### Unit-V: Budgeting

Meaning and components of budget –Revenue deficit and Fiscal deficit –Fiscal Policy Meaning and objectives.–Deficit Financing.

#### Reference Books :

1. M. L. Seth : Macro Economics-1998.
2. M. L. Jinghan : Public Finance and International Trade
3. K. P. M. Sundaram : Public Finance.
4. D. M. Mithani : Modern Public Finance –
5. Hugh Dalton : Principles of Public Finance –
6. R. A. Musgrave : 'The Theory of Public Finance'
7. Philips E. Taylor : 'The Economics of Public Finance'
8. M. M. Gupta : Macro Economics
9. M. C. Vaish : Macro Economics

### B.A. VI SEMESTER

#### Subject: INDIAN ECONOMY – PAPER -II (Optional) (Teaching Hrs. 5 per week)

#### Objectives:

- To provide the knowledge of Indian economy.
- To study the applied aspects of Economics.

#### Unit I:- DEVELOPMENT OF INDIAN ECONOMY

India as a developing economy  
Role of Infrastructure in Indian economic development  
Demographic features and Human Development Index – HDI

- Progress of Indian economy under 10<sup>th</sup> and 11<sup>th</sup> five year plans 15 hrs

#### Unit II :-AGRICULTURAL DEVELOPMENT

Measures to increase agricultural productivity  
Green Revolution and its Impact.  
Agricultural finance and Government Policy

- Agricultural Marketing , Role of Regulated and Co-operative markets 12 hrs

#### Unit. III :-INDUSTRIAL DEVELOPMENT

Industrial Policy of 1951&1991.



Scope of small scale Industries in Indian economy  
 Institutional Industrial finance  
 Scope of MNC'S in India.

- Industrial Development and Information Technology 15 hrs

#### Unit IV :- POVERTY AND UNEMPLOYMENT

Poverty- Meaning, extent and causes.  
 Unemployment- Meaning, types and extent.  
 Causes for Rural unemployment:-

- Poverty alleviation programmes 08 hrs

#### Unit V:- FOREIGN TRADE RELATIONS

Volume, Composition and Direction of Foreign Trade  
 Balance of Payments Position of India.  
 India's Recent Foreign Trade Policy Measures

- India and WTO 10 hrs

#### Reference Books:-

1. Rudder Datta & K P M Sundaram - Indian Economy
2. Mishra & Puri - Indian Economy
3. A.N.Agarwal - Indian Economy
4. J.C.Dhingra - Indian Economy
5. India Year Books - Recent Edition.

### B.A. VI SEMESTER

#### Subject: KARNATAKA ECONOMY - PAPER II (Optional) (Teaching Hrs. 5 per week)

#### Objectives:

1. To provide the knowledge of Karnataka Economy.
2. To bring out the structural changes in Karnataka

#### Unit – 1 : Characteristics of Karnataka Economy:

Natural Resources – Meaning and Types, –  
 Sectoral Composition and Trends.

Physical Features.

12 Hrs.

#### Unit – II ; Human Resources:

Demographic Features – Size, Sex Ratio, Density of population, Literacy. Causes for increase – Effects, –  
 Population policy. Women and Child Development programmes –. SHGs and Micro finance

12 Hrs.



# GROUP- D

## Agricultural Marketing (Optional)

BA - VIth Semester

Subject: AGRICULTURAL MARKETING

PAPER-6.1- AGRICULTURAL MARKETING, LEGISLATION AND POLICIES

Teaching 5hrs per week

Marks: 100 (80 theory+20 Internal Assessments)

**Objectives:** 1.To understand Marketing Legislation.

2. To provide the information regarding marketing mechanization and advertising.

**Unit-I Marketing Legislation & Policy:**

Need & importance of Marketing legislation, Agricultural produce Market Act in Karnataka, Salient features of Essential Commodities Act, Consumer protection Act, Prevention of food Adulteration Act-1954, Karnataka Agricultural Marketing (Development Regulation) Act-2007

15hrs

**Unit-II Agricultural Input & Mechanisation of Agriculture:**

Importance, scope & characteristics of input marketing, Defects in fertilizer marketing & remedial measures, Seed Marketing & distribution, National Seed corporation (NSC) Karnataka Seeds corporation (KSC), Mechanisation of agriculture its merits & demerits.

13hrs

**Unit-III Price policies & Strategies: Meaning-functions.**

Objectives of price policy, Marketing strategies- Meaning & types.

10hrs

**Unit- IV Advertising:**

Meaning & Definition of Advertising, aims & objectives of advertising, Economic and social effects advertising, Advantages & Limitations.

12hrs

**Unit-V State Trading in India:**

Meaning & objectives of state trading, State trading corporation & subsidiary corporation, Food Corporation of India (FCI), Cotton Corporation of India (CCI) & Jute Corporation of India (JCI)

10hrs



## PRACTICALS (4hrs per week)

Marks-External

Marks-Internal

Total -50 Marks

study of Marketing Channels for seeds & fertilizers.  
Estimation of Demand for Seeds & fertilizers.  
Visit to fertilizer Marketing Agencies  
Visit to Karnataka state seeds corporation  
Study of farm harvest prices  
Visit to consumer forums  
Visit to state trading corporation  
Visit to weight & measurement department

### Books for Reference:

Agricultural Marketing in India By Acharya and N.L.Agarwal  
Principles and Practices of Marketing By C.B.Memoria and R.L.Joshi  
Agricultural Marketing By H.R.Krishnagouda  
Marketing of Agricultural Produce in India By A.P.Gupta  
Modern Marketing by K.D.Basva  
Modern Marketing by C.B.Memoria.  
Agricultural marketing in India by S.C.Jain

### Journals and Magazines:

Indian Journal of Marketing  
Indian Journal of Agricultural Marketing  
Yojana  
Kurakchatrya

### Websites:

[www.agricoop.nic.in](http://www.agricoop.nic.in) (Ministry of agriculture and cooperation:Govt. of India)  
[www.mofpi.nic.in](http://www.mofpi.nic.in) ( Ministry of Food Processing industries:Govt. of India  
[www.krishimaratahavahini.kar.nic.in](http://www.krishimaratahavahini.kar.nic.in) (Dept of Agril.Mkt, Govt of Karnataka)  
[www.agmarknet.nic.in](http://www.agmarknet.nic.in) (Agril.Mkt Research & Information Network)  
[www.fao.org](http://www.fao.org) (Food and Agril. Organization)  
[www.ksamb.gov.in](http://www.ksamb.gov.in) (karnatak State Agril.Mkt Board)



**BA - Vith Semester**  
**Subject: AGRICULTURAL MARKETING**

**PAPER-6.2: INDIAN ECONOMY**  
**Teaching 5hrs per week**  
**Marks: 100 (80 theory+20 Internal Assessments)**

- Objectives:** 1. To know the various aspects of Indian Economy  
2. To know the share of Agricultural in India's Foreign Trade.

**Unit-I Indian Economy:**

Characteristics of Indian economy. Determinants of economic development in India  
10hrs

**Unit-II Agriculture Labour :**

Definition & characteristics of agriculture labour. Causes of the poor economic conditions of agriculture labour. Measures adopted by the Govt. of India to improve economic conditions of agriculture labour. Suggestions for improving the conditions of agriculture labour.  
15hrs

**Unit-III Agriculture Price Policy in India:**

Causes for Price fluctuation. Need for stabilizing the agriculture Prices. Regulatory measures. 10hrs

**Unit-IV Agro Based Industries:**

Meaning and Need of Agro-based Industries. Importance of Agro based industries with reference to Sugar, Cotton & Jute industries. Problems of Agro-based industry.  
12hrs

**Unit-V International Trade & Export Management:**

Meaning and Importance of international trade. Advantages & dis-advantages Of international trade. Share of agricultural products in total imports & exports of India. Impact of Liberalization Privatization & Globalisation (LPG). Impact of LPG on Agriculture. World Trade Organisation (WTO) & India.

13hrs

**PRACTICALS (4hrs per week)**

Marks-External

Marks-Internal

**Total -50 Marks**

- A study of recent trends in Indian Economy
- A study of socio-economic conditions of agril.Labour
- Construction of Price Index Numbers
- Visit to Sugar Industry



## GROUP – E

### 1. History (Optional)

#### History & Archaeology

#### B.A VI Semester

#### History of India (1858-1947)

#### Paper I- (Compulsory)

One Paper carrying 80 marks and 3 hours duration.  
(Teaching hours :5 hours per week - 16 weeks x 5 = 80 hours)

<b>UNIT - I. India under British Crown</b>	<b>21 Hrs</b>
A. Lytton –Domestic and foreign policy B. Lord Rippon- His reforms C. Lord Curzon- Domestic and foreign policy	
<b>UNIT - II. Socio-Religious reform movements of 19th and 20th centuries.,</b>	<b>17 Hrs</b>
A. Brahma Samaj-Rajaram Mohari Roy Prarthana samaj- Ranade Arya Samaj-Dayanand Saraswati. B. Ramakrishna Mission – Swami Vivekananda Theosophical Society – Mrs. Annie Besant C. Alighar Movement – Sir Sayyad Ahmed Khan Non - Brahmin movement.	
<b>UNIT - III. Constitutional Developments</b>	<b>16 Hrs</b>
A. Act of 1909 B. Act of 1919 C. Act of 1935 & 1947	
<b>UNIT - IV. INDIAN National Movement- Rise and Growth</b>	<b>20 Hrs</b>
A. I <sup>st</sup> Phase –1885-1905 B. II <sup>nd</sup> Phase –1905-1919 C. III <sup>rd</sup> Phase –1919-1947	
Education, Art and Architecture	
<b>UNIT - V. Map Topics ( one question compulsory)</b>	<b>06 Hrs</b>
A. Introduction of Dyarchy in various provinces under Act of 1919. B. Places of Historical Importance. 1) Wardha 2) Sabaramati 3) Alighar 4) Amritsar 5) Chauri-Chaura 6) Dandi 7) Shivapur 8) Haripur 9) Bombay 10) Calcutta 11) Poona 12) Benares 13) Surat	





14) Luknow 15) Nagapur 16) Gaya 17) Lahore 18) Allahabad 19) Belgaum

### Books for Reference

Indian national movement & Constitutional Development, By: R.N. Agarwal

Modern India by: L.P. Sharma

India from Curzon to Nehru & After by: Durgadas

Nationalism and Colonialism in Modern India- Bipin Chandra

A new look at Modern Indian History. By: B.L. Grover, Alka Mehta

History of Freedom movement in India by : R.C Majumdar

Struggle for India's Independence by: Bipin Chandra

DzsAA=PA sAgAvAzA Ew^A,A : r.n. eEAE^2

DzsAA=PA sAgAvAzA Ew^A,A qA PE ,AzA^2A

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## Rani Chennamma University, Belagavi

### History & Archaeology

#### B.A VI Semester

#### Paper-II

#### Modern Europe (1914-1990 AD)

Paper carrying 80 marks and Three hours duration

(Teaching hours 5 hours per week - 16 weeks x 5=80 hours)

<b>UNIT :I</b>	<b>20 hrs</b>
First World War – Causes, Course and Results Paris Peace conference League of Nations	
<b>UNIT :II</b>	<b>20hrs</b>
Russian Revolution of 1917 – Causes, Course & Results Lenin & Stalin –Domestic and Foreign Policy Rise of Dictatorship in Italy and Germany	
<b>UNIT -III</b>	<b>07hrs.</b>
Second World War –Causes, Course & Results UNO : Objectives, Structure and Achievements Post – War military pacts in Europe – NATO, CENTO, SEATO Warsaw pact	
<b>UNIT -IV</b>	<b>17hrs</b>



- A) Cold War (1945-1990) meaning, Ideology and Impact
- B) Re-union of Germany -1990
- C) Disintegration of USSR – Michael Gorbachev

**UNIT -V Map Topics (One question compulsory)**

**06hrs**

- A. Important places where battles of World War I occurred
- B. Places of Historical Importance.
  - 1. Metz 2. Sarajevo 3. Geneva 4. The Hague 5. Rome
  - Nuremberg 7. Moscow 7. Berlin 9. Munich 10. Helsinki
  - Warsaw 12. Constantinople 13. Crimea 14. Corfu
  - Tunis 16. Bonn 17. Copenhagen 18. Lisbon
  - 19. Vienna 20. Locarno

**Books of reference :**

- Modern Europe : V.D.Mahajan
- History of Modern Europe : Raghavendra Prabhu
- Text book of European History: Raghbir Dayal, Delhi
- Europe since Napoleon, Penguin, 1978 : David Thompson
- History of Modern Europe : C.D Hazen : S. Chand
- Publication, New delhi.
- Modern Europe- K L Khurana
- DzsAAoPA AIAAAgE/EAWA : r. n eE/EA?
- DzsAAoPA AIAAAgE/EAWi : PE dUAcAA±A
- 10.DzsAAoPA AIAAAgE/EAWA : qA|| WAINAEAc
- 11. «±Aé Ew°A,AzA °EeEO UAAgAAvAAU%AA : gA°AA°AUAA

**Rani Chennamma University, Belagavi**

**History & Archaeology**

**VI Semester**

**History & Culture of Karnataka (From 1336 - 1956 A.D)**

**Paper -II**

One Paper carrying 80 marks and 3 hours duration.

(Teaching hours :5 hours per week - 16 weeks x 5 = 80 hours)

**Unit-I:**

**20 hrs**

Vijayanagara Empire: The Saluva & Tuluva dynasties, the age of Krishnadevaraya- Battle of Talikota & Decline. Vijayanagara contributions to administration, religion, literature, art and architecture. Bahamani Kingdom: Muhammad Gawan.



The Question paper should be broadly based on the following pattern for paper I & paper II, 5<sup>th</sup> & 6<sup>th</sup> Semester.

Q1. Multiple choice questions.	1*10=10
Q2. Essay type question from text with choice	1*15=15
Q3. Question on R.C. from the text	1*15=15
Q4. Translation and explanation from the text with choice	3*05=15
Q5. Appreciation of verses from the gazals only	3*05=15
Q6. Translation from Urdu/English, Persian	1*10=10

### Political Science (Optional)

#### B.A. -III year Semester-VI

W.E.F. 2018-19

Compulsory Paper -I

International Relations

80 Marks 5 hrs per week

#### Course Rationale:

This paper deals with concepts and dimensions of international relations and The Concept of theories of power and different aspects of balance of power are included. The student is expected to study International Politics and India's Foreign Policy from a pro-active and futuristic perspective.

#### Chapter- 1 Introduction

- The Nature and scope of International Relations and it's importance.
- International Relations in the age of Globalisation

8 hours

#### chapter-2 National Power

- Meaning and elements of National Power
- Tangible and intangible elements.

12 hours



### Chapter-3 - Instruments of National Interest

- a) War- Meaning, types, Causes, consequences and Remedies of War
- b) Diplomacy- Meaning Nature, classification and kinds of Diplomacy, Privileges and Immunities

12 hours

### Chapter-4 - United Nations Organisations

- a) Aims, principle organs of UN. b) Specialised agencies of UN- IMF, IBRD, UNESCO c) Achievements of UN d) Changing role and Need for reformation of UN

15 hours

### Chapter-5 - Approaches to International Peace

- a) Collective Security, Balance of Power, Disarmament Arms, Control Peaceful settlement of International Disputes
  
- b) Indian Foreign Policy, Objectives and Principles of India's Foreign Policy

15 hours

### Books Reference

1. Palmer and Perkins International Relations The World Community in Transition, Scientific Book Agency, Latest Edition.

2. Michael G. Roskin I.R. the New World of International Relations, Prentice Hall of India, New Delhi, 2002

3. Peter Calvo Coressi World Politics 1945-2000, Pearson Publications, New Delhi, 2004

4. Vinay Kumar Malhotra International Relations, Anmol Publications, New Delhi, 2004

15. Joshua S. Goldstein International Relations, Pearson Publications, New Delhi, 2004

6. Vandana V. Theory of International Politics, Vikas Publishing House, New Delhi, 1996

7. Praash Chandra International Politics, Vikas Publishing House Pvt, Ltd. New Delhi, 2001.



**Books for Study:**

1. Lao Tse: What is Political Philosophy.  
Robert N. Bock: Handbook in Social Philosophy.  
J.Fierg: Social Philosophy.  
A.K.Sinha: Outlines of Social Philosophy  
N.V. Joshi: Social and Political Philosophy.  
D.D.Raphael: Problems of political Philosophy  
M.K.Gandhi: Hind Swara).  
K.G. Mashruwalla; Gandhi and Marx.  
T.S. Devadass: Sarvodaya and the problem of Political Sovereignty.  
Peter Singer: Practical Ethics  
S.J.Benn & R.S.Peters: Social Principales and Democratic State.  
K.Roy & C.Gupta (Eds): Essayes in Social and Political Philosophy

**Sociology (Optional)**

With effect from 2017-18 (2015-16 Scheme)

B. A. Sixth Semester

Compulsory Paper- 6.1

**SOCIAL PROBLEMS IN INDIA****Objectives of the Paper:**

- To understand about the Nature of Social Problems.
- To understand the Nature & Causes of Changing Crimes in India.
- To understand the Nature of Vulnerable Problems of Life.

**Unit-I Introduction****12 Hours**

- Meaning and Nature of Social Problems
- Causes and Consequences of Social Problems
- Social Problems and Social Disorganisation

**Unit-II Crime****12 Hours**

- Meaning, Nature and Types



Causes and Consequences

Measures to Control

**Unit- III Prostitution and HIV/ AIDS**

**12 Hours**

Meaning, Nature, and Types

Causes and Effects

Measures to Control

HIV/ AIDS: Causes, Effects and Measures

**Unit- IV Terrorism**

**12 Hours**

Meaning and Nature

Causes and Effects

Measures to Control

National Integration: Meaning, Obstacles and Efforts for  
National Integration

**Unit- V Corruption in Public Life**

**12 Hours**

Meaning and Nature

Causes and Effects

Measures to Control Corruption

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**References:**

Ahuja Ram (1998): Social Problems in India. Rawat Publications, Jaipur.

Davis James (1970): Social Problems Enduring Major Issues and Change. New York: Free Press.

Elliot and Merril (1950): Social Disorganization. New York: Harper and Brothers.



**B. A. Sixth Semester**  
**Elective Paper- 6.4**  
**URBAN SOCIETY IN INDIA**

**Objective of the Paper:**

To understand about the Evolution of Cities and Urban Communities.

To make the students to be Aware with Urban Problems in India.

To understand Urban Planning and Urban Development.

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**Unit- I Introduction to the Study of Urban Society 12 Hours**

Meaning, Definition and Characteristics of Urban Society

Types of Cities and Urban Communities

Importance of the Study of City Life

**Unit- II Urbanisation in India 12 Hours**

Emerging Trends and Patterns of Urbanisations

Factors of Rapid Urbanisation

Over Urbanisation.

**Unit- III Cities in India 12 Hours**

Class- I Cities, Trends and Patterns of Urbanisation

Growth of Metropolitan Cities (Million Cities)

Growth of Mega Cities



**Course Structure and Syllabus  
for**

**Bachelor of Science  
2016-17 and onwards**





# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**WEL-COME**

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.Sc**

**I Semester**

**w.e.f.**

**Academic Year 2017-18 Onwards**



## 2. PHYSICS (Optional)

(With effect from 2017-18 onwards)

Physics 1.1: MECHANICS AND PROPERTIES OF MATTER. (Total Hours: 50)

SUBJECT CODE: 17BSCPHYT11

### UNIT I

#### SHM

Differential equation of linear SHM. Energy of a particle, potential energy and kinetic energy (derivation), composition of two rectangular SHM's having same periods, Lissajous figures.

Problems.

(3 + 1 = 4 hours)

#### Linear momentum

Concept of frames of reference. Laws of conservation of Linear Momentum for a System of particles. Elastic Collision between two particles in Laboratory and Center of Mass frames of references. Inelastic collision between two particles in Laboratory and Center of Mass frames of references (without derivation).

Conservation of Linear Momentum in case of variable mass. Derivation of equation of motion for Single Stage Rocket

Problems.

(5 + 1 = 6 Hours)

### UNIT II

Angular momentum for system of particles:

Angular Momentum and torque, Conservation of angular momentum, central force, Kepler's Second Law (derivation), Spin, Orbital and Total Angular Momentum.

Problems.

(3 + 1 = 4 Hours)

Conservation of energy and elements of satellite motion:

Conservation of energy as a basic principle including mass – energy ( qualitative ). Simple harmonic oscillations of a Light Spiral Spring (illustration with derivation ).

Derivation of velocity (orbital velocity and escape velocity) in Closed and Open orbit in a central field, Escape velocity of a satellite: stationary satellites, weightlessness.

Problems

(5 + 1 = 6 hours)



### UNIT III

#### Rigid body dynamics

Moment of inertia and its physical significance. Derivation for theorems of moment of inertia. Derivation of expression for moment of inertia of rectangular lamina, thin Uniform rod, Circular disc.

Qualitative discussion on Moment of inertia of Annular ring, hollow and solid cylinders. Theory of bar pendulum and compound pendulum. Experimental determination of Moment of inertia of Fly wheel with relevant theory.

Problems

( 8 + 2 = 10 hours)

### UNIT IV

#### Elasticity

Moduli of elasticity of isotropic materials and relation between three moduli of elasticity (derivation ). Poisson's Ratio, bending of beams, expression for bending Ratio. Expression for bending moment ( derivation ). Theory of Light cantilever and loaded at the free end and at the center. Expression for couple per unit twist, torsional pendulum.

Problems

( 9 + 1 = 10 hours)

### UNIT V

#### Surface tension

Introduction to surface tension, derivations for Pressure difference across a curved liquid surface and expression for rise of liquid in a capillary tube.

Determination of surface tension by Quinke's method with relevant theory.

Effect of temperature and impurity on surface tension.

Problems

(4 + 1 = 5 hours)

#### Viscosity

Introduction to viscosity, streamline and turbulent flow. Derivation of Poiseuelli's formula for the flow of viscous fluid through a narrow tube . Motion of body in a viscous medium-Stoke's law with derivation and expression for terminal velocity example: velocity of rain drop.

Problems

( 4 + 1 = 5 hours)



**PHYSICS 1.2 : LAB - I**  
**SUBJECT CODE: 17BSCPHY12**

**LIST OF EXPERIMENTS**

1. Bar pendulum.
2. Flat spiral spring.
3. M.I. of Fly wheel.
4. Rigidity modulus - Torsional Pendulum.
5. Verification of parallel and perpendicular axes theorems of M.I.
6. Young's modulus (  $Y$  ) by uniform Bending - load Vs depression graph.
7. Young's modulus (  $Y$  ) by cantilever - load Vs depression graph.
8. Surface tension by Quincke's method.
9. Coefficient of viscosity by Stoke's method.
10. Radius of capillary tube by mercury pellet method.

**NOTE:**

1. Experiments are of four hours duration.
2. Minimum of eight experiments to be performed.

**REFERENCE BOOKS:**

1. Mechanics - D.S.Mathur
2. Mechanics - J.C.Upadhyaya.
3. Properties of Matter- D.S.Mathur
4. Properties of Matter- Brij Lal and Subramanyam.
5. Physics (Vol - I) - Resnick and Halliday.
6. Berkeley Physics ( Vol - I ).



## 4. CHEMISTRY (Optional)

### COURSE PATTERN

Semester	Particulars	Instruction Hours per week	Duration of Exams	Internal Assessment Marks	Examination Marks
I	Theory Paper-I	4hrs	3hrs	20	80
	Practical-I	4 hrs	4 hrs	10	40
II	Theory Paper-II	4hrs	3hrs	20	80
	Practical-II	4 hrs	4 hrs	10	40
III	Theory Paper-III	4hrs	3hrs	20	80
	Practical-III	4 hrs	4 hrs	10	40
IV	Theory Paper-IV	4hrs	3hrs	20	80
	Practical-IV	4 hrs	4 hrs	10	40
V	Theory Paper-Va	4hrs	3hrs	20	80
	Theory Paper-Vb	4hrs	3hrs	20	80
	Practical-Va	4 hrs	4 hrs	10	40
	Practical-Vb	4 hrs	4 hrs	10	40
VI	Theory Paper-VIa	4hrs	3hrs	20	80
	Theory Paper-VIb	4hrs	3hrs	20	80
	Practical-VIa	4 hrs	4 hrs	10	40
	Practical-VIb	4 hrs	4 hrs	10	40



## 8. MATHEMATICS (Optional)

SYLLABUS FOR THE ACADEMIC YEAR 2014-15 ONWARDS

### B.Sc I Semester

#### Paper-I DIFFERENTIAL CALCULUS

Teaching Hours : 50 Hours

##### UNIT-I

###### REAL NUMBERS

10 Hours

Real numbers, Postulates and their Consequences, Inequalities and Absolute values, Archimedean property, LUB and GLB properties.

##### UNIT-II

###### LIMITS AND CONTINUITY

10 Hours

Recapitulation of limits and continuity, Algebra of limits (with proofs), Properties of continuous functions, Boundedness of continuous functions, Intermediate value theorem, Borel covering theorem (statement only), Uniform continuity.

##### UNIT-III

###### HIGHER ORDER DERIVATIVES

10 Hours

The  $n^{\text{th}}$  derivative of  $(ax + b)^n$ ,  $1/ax+b$ ,  $\log(ax+b)$ ,  $e^{ax+b}$ ,  $\sin(ax+b)$ ,  $\cos(ax+b)$ ,  $e^{ax} \sin(bx+c)$ ,  $e^{ax} \cos(bx+c)$ , Leibnitz's Rule for  $n^{\text{th}}$  derivative of a product.

##### UNIT-IV

###### MEAN VALUE THEOREMS

15 Hours

Rolle's Theorem, Lagrange's Mean Value Theorem, Cauchy's Mean Value Theorem, Taylor's Theorem (with Schomilch and Rouché's form of remainder), Maclaurin's Series.

##### UNIT-V

###### INDETERMINATE FORMS

05 Hours

L-Hospital's rule (statement only), Indeterminate forms of  $0/0$ ,  $\infty/\infty$ ,  $0+\infty$ ,  $\infty-\infty$ ,  $0^0$ ,  $1^\infty$  and  $\infty^0$ .

###### Reference Books:

Differential Calculus – Shantinirayan and Mittal

Mathematical Analysis-Shantinirayan

First Course in Real Analysis-M.K.Singal and Asha Rani

Text book of B.Sc Mathematics- G.K. Ranganath



## Paper-II ALGEBRA AND TRIGNOMETRY

Teaching Hours : 50 Hours

### UNIT-I

#### DETERMINANTS

05 Hours

Determinant of fourth order, Symmetric and Skew-Symmetric determinants, Reciprocal determinants.

### UNIT-II

#### MATRICES

15 Hours

Recapitulation of Matrices of Symmetric matrices and Skew symmetric matrices, Elementary transformations, Rank of a Matrix, Reduction to Normal forms, Inverse of matrix, Solution system of Linear equations.

### UNIT-III

#### SET THEORY

10 Hours

Equivalence relations, Partition of a Set, Arbitrary unions and intersections, De Morgan's laws, Countable and Uncountable sets.

### UNIT-IV

#### THEORY OF EQUATIONS

10 Hours

Polynomial equation of  $n^{\text{th}}$  degree in one variable, Euclidean algorithm, Remainder Theorem, Factor Theorem, Fundamental Theorem of Algebra, Relation between the roots and coefficient of general polynomial equation in one variable, Synthetic division. If one of the root of an equation  $a_0x^n + a_1x^{n-1} + \dots + a_n$  has one of its rational root is  $p/q$ , then  $p$  is an exact divisor of  $a_n$  and  $q$  is an exact divisor of  $a_0$ . Solution of cubic and Bi-quadratic equations.

### UNIT-V

#### TRIGONOMETRY

10 Hours

Expansions of Sine and Cosine functions, Series of Sines and Cosines, Hyperbolic functions, Logarithm of a Complex number, Summations of Trigonometric series.

#### Reference Books:

1. Modern Algebra- D.C. Pavate
2. Algebra -Vasistha
3. Matrices -Ayres(Schaumpubl co)
4. Matrices and determinants- M.L. Khanna
5. Trigonometry- P.N.Chatterji
6. Geometry and Trigonometry-D.C. Pavate



## 9. BOTANY (Optional)

### B.Sc. SEMESTER-I BOTANY (optional)

FOR THE ACADEMIC YEAR 2017-18 & ONWARDS

#### Paper- I PLANT ANATOMY AND EMBRYOLOGY.

50 Hours

#### UNIT-I

10 Hours

Tissues- meristems, types, characters, histological organisation of root & shoot apices theories. Permanent tissues- simple & complex. Types of vascular bundles. Tissue systems- dermal, mechanical, secretory- nectary, laticiferous & oil glands.

#### UNIT-II

15 Hours

Internal structure of primary plant body- root, stem & leaf (dicot & monocot). Secondary growth – root & stem. Abnormal secondary growth – general account with the examples Bignonia, Boerhaavia, Dracaena & Beetroot.

#### UNIT-III

05 Hours

Wood anatomy- General account, ring porous, diffuse porous, distribution & types of wood parenchyma, Tracheary elements, fibre types.

#### UNIT-IV

10 Hours

Antler – development, microsporogenesis & male gametophyte, MGL. Palynology applications of palynology in taxonomy, coal, oil exploration & forensic science. Ovule – development, types, structure of anatropous ovule, megasporogenesis, development of gametophyte-monosporic, bisporic & tetrasporic types (Peperomia, Drusa, Fritillaria & Adoxa.) & FGL.

#### UNIT-V

10 Hours

Fertilization – Pollen –pistil interaction, entry of pollen tube into the stigma, style & embryo sac, double fertilization. Endosperm – Types. Embryogeny – dicots (crucifer) & monocot (grass). A brief account of polyembryony & apomixis & their significance.





**BSc I Semester Scheme (CBSC - Pattern)**  
**Zoology (Optional) (Revised)**  
**Syllabus 2017-2018 Onwards**

Semesters	Syllabus	Total Hours	Theory & Practical/ Week
I	<b>BIOLOGY OF NON-CHORDATES</b>	50hrs.	4 hrs.
	<b>PRACTICAL</b>	12	4 hrs.

**NOTE:**

THEORY MARKS			PRACTICAL MARKS		
Internal	Annual	Total Marks	Internal	Annual	Total Marks
20	80	100 marks	10	40	50 marks

**Question paper pattern for THEORY examination**

Que.No.	Marks	Solve	Total Marks
I	02	10	20
II	04	05	20
III	10	04	40
			<b>TOTAL -- 80 MARKS</b>

**PRACTICAL pattern for examination**

Que.No.	Solve	Total Marks
I	Dissection ( Explain any one system)	06
II	Mounting	05
III	Identification / Spotting ( 12 )	24
IV	Journal	05
		<b>TOTAL --- 40 MARKS</b>





# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**WEL-COME**

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.Sc.**

**II Semester**

**w.e.f.**

**Academic Year 2017-18 Onwards**



## 2. PHYSICS (Optional)

(With effect from 2017-18 onwards)

Physics 2.1: SOUND AND THERMAL PHYSICS (Total Hours: 50)

17BSCPHYT12

### UNIT I

#### SOUND

Free, forced and sustained vibrations, resonance with examples.

Analytical treatment of undamped, Damped and forced vibrations, Condition for amplitude at resonance, phase of forced vibrations, effect of damping on phase of forced vibrations. Theory of Helmholtz-Resonator and determination of unknown frequency.

Transducers and their characteristics: Pressure microphone (Carbon), moving coil loud speaker.

Problems:

(9 + 1 = 10hours)

### UNIT II

#### KINETIC THEORY OF GASES

Postulates of kinetic theory of gases, Maxwell's law of distribution of velocities (derivation assuming constants a and b). Average, r.m.s and most probable velocity (derivation). Mean free path, derivation of Clausius expression, & Maxwell's expression. Brownian Motion and derivation of Einstein's equation for translational Brownian motion.

Problems:

(9 + 1 = 10 hours)

### UNIT III

#### THERMODYNAMICS

Heat engines: Otto Engine, Otto Cycle; expression for efficiency.

Diesel engine: Diesel cycle, expression for efficiency and Carnot's Theorem.

Entropy: Concept of entropy, change in entropy in reversible and irreversible processes. Entropy – Temperature diagram, Second law of thermodynamics.

Maxwell's Relations : Derivation of Maxwell's Relations.

Applications to Clausius – Clapeyron's equation.

Problems:

(8 + 2 = 10 hours)



## UNIT IV

### LOW PRESSURE AND TEMPERATURE

Production of low pressure: Exhaust pump and its characteristics (Exhaust pressure, degree of vacuum attainable, speed of pump).

Expression for speed of pump.

1. Diffusion pump: Principle, construction and working.
2. Ionization gauge: Principle, construction and working.

Production of low temperature: Joule Thomson effect, porous plug experiment with analytical treatment concept of its version temperature.

Problems.

(9 + 1 = 10 hours)

## UNIT V

### Radiation

Radiation pressure ( qualitative ), Stefan's Law and its derivation using radiation pressure. Determination of Stefan's constant. Energy distribution in the Black body spectrum. Wein's displacement law and Rayleigh – Jean's Law ( qualitative ). Planck's law and its derivation. Derivation of Wein's Displacement law & Rayleigh Jean law from Planck's law.

Problems.

(9 + 1 = 10 hours)

## PHYSICS 2.2 : LAB – II

### 17BSCPHY22

#### LIST OF EXPERIMENTS

1. Helmholtz Resonator.
2. Frequency of A.C using sonometer.
3. Velocity of sound through material of wire using sonometer.
4. Characteristics of loud speaker (Tweeter and Woofer).
5. Determination of thermal conductivity of bad conductor by Lee's method.
6. Determination of Stefan's constant.
7. Verification of Stefan's law.
8. Specific Heat of Liquid by method of cooling.
9. Characteristics of microphone.
10. Determination of solar constant.

#### NOTE:

1. Experiments are of four hours duration.
2. Minimum of eight experiments to be performed.



#### 4. CHEMISTRY (Optional)

##### COURSE PATTERN

Semester	Particulars	Instruction Hours per week	Duration of Exams	Internal Assessment Marks	Examination Marks
I	Theory Paper-I	4hrs	3hrs	20	80
	Practical-I	4 hrs	4 hrs	10	40
II	Theory Paper-II	4hrs	3hrs	20	80
	Practical-II	4 hrs	4 hrs	10	40
III	Theory Paper-III	4hrs	3hrs	20	80
	Practical-III	4 hrs	4 hrs	10	40
IV	Theory Paper-IV	4hrs	3hrs	20	80
	Practical-IV	4 hrs	4 hrs	10	40
V	Theory Paper-Va	4hrs	3hrs	20	80
	Theory Paper-Vb	4hrs	3hrs	20	80
	Practical-Va	4 hrs	4 hrs	10	40
	Practical-Vb	4 hrs	4 hrs	10	40
VI	Theory Paper-VIa	4hrs	3hrs	20	80
	Theory Paper-VIb	4hrs	3hrs	20	80
	Practical-VIa	4 hrs	4 hrs	10	40
	Practical-VIb	4 hrs	4 hrs	10	40



MATHEMATICS SYLLABUS FOR THE ACADEMIC YEAR 2014-2015 ONWARDS

B.SC II SEMESTER

PAPER I: DIFFERENTIAL AND INTEGRAL CALCULUS

TOTAL TEACHING HOURS: 50

TEACHING HOURS PER WEEK: 05 HOURS.

UNIT-I

Polar coordinates of a point and polar curve. Angle between the radius vector and the tangent at a point on the curve. Angle of the intersection of two curves. Polar and pedal equation of the curves. Polar sub-tangent and polar sub-normal. **10 hours**

UNIT-II

Derivative of arc length, Curvature, Radius of curvature in Cartesian, Parametric, polar and pedal forms. Centre of curvature, Evolutes and involutes. **10 hours**

UNIT III

Limits, continuity of functions of two variables. Partial derivatives, higher order partial derivatives, total derivatives and total differentials, Homogeneous functions, Euler's theorem on homogeneous functions. **10 hours**

UNIT - IV

Concavity and Convexity of curves. Points of inflexion of curves. Envelops, and asymptotes. **10 hours**

UNIT - V

Reduction formulae for integration of  $\sin^n x$ ,  $\cos^n x$ ,  $\tan^n x$ ,  $\cot^n x$ ,  $\sec^n x$ ,  $\operatorname{cosec}^n x$ ,  $\sin^n x \cos^n x$ ,  $x^n e^x$ ,  $x^n (\log x)^n$ . **10 hours**

**Books of reference:**

1. Differential Calculus : Santinarayan and Dr. P.K. Mittal
2. Integral Calculus : Santinarayan and Dr. P.K. Mittal
3. Differential Calculus and integral Calculus : N.P. Bali
4. Text Book of B.Sc Mathematics: G. K. Ranganath
5. Differential Calculus and integral Calculus :P. N. Chatterji.



**MATHEMATICS SYLLABUS FOR THE ACADEMIC YEAR 2014-2015 ONWARDS**  
**B.SC II SEMESTER**  
**PAPER II :ALGEBRA AND GEOMETRY**

**TOTAL TEACHING HOURS: 50**

**TEACHING HOURS PER WEEK:05 HOURS.**

**UNIT-I**

**Boolean algebra:** Lattices and algebraic structures. Principle of duality. Distributive and complemented lattices. Boolean lattices and Boolean algebra. Boolean functions and expressions. **10 hours**

**UNIT-II**

**Number theory:** Recap of division algorithm, properties of prime and composite numbers. Congruences and its properties, Fundamental theorem of arithmetic, Bracket function, Euler's function, Fermat, Euler and Wilson's theorems. **10 hours**

**UNIT-III**

**Sphere:** Equation of a sphere, section of a sphere by a plane, Equation of a sphere through a circle, Equation of a sphere through two given points as ends of a diameter, Equation to a tangent plane of a sphere, Condition for tangency, Radical planes, Orthogonality of two spheres. **10 hours**

**UNIT-IV**

**Cones:** Equation of a cone, enveloping cone of a sphere, Right circular cone. **10 hours**

**UNIT-V**

**Cylinder:** Equation of a cylinder, enveloping cylinder of a sphere, Right circular cylinder. **10 hours**

**Books of reference:**

1. Discrete Mathematical structure for Computer Science :KOlman. B .Busy R C (Phi)
2. Discrete Mathematics: C. L. Liu
3. Theory of Numbers Prakash Om (Golden series)
4. Analytical Solid geometry: Santinarayan and Dr. P.K. Mittal
5. Solid Geometry: N.P. Bali



## 9. BOTANY (Optional)

### B.Sc. SEMESTER-II BOTANY (optional)

#### Paper-I PLANT PHYSIOLOGY AND BIOCHEMISTRY

Teaching  
hours: 50

##### UNIT-I

10 Hours

Water Relations: solutions, suspensions & colloids, true solutions, percentage, molarity, molar, buffer, molar solutions, pH, colloids, emulsion, and gels.

Permeability, diffusion, imbibition, osmosis, membranes, endosmosis, exosmosis, osmotic pressure, turgor pressure (TP), wall pressure (WP), relation between OP, DPD & TP, concept of water potential, plasmolysis, deplasmolysis, significance of osmosis & imbibition. Importance and sources of water. Active and Passive water absorption.

Mechanism of ascent of sap: root pressure theory and cohesion-tension (Dixon & Jolly) theory.

Transpiration: types, mechanism, theories of opening & closing of stomata, factors affecting rate of transpiration: antitranspirants and guttation.

Mineral nutrition: macro and micronutrients and their role & deficiency symptoms.

##### UNIT-II

10 Hours

**Photosynthesis:** Photosynthetic pigments; action spectrum, concept of two photosystems; Red drop & Emerson enhancement effect, photo phosphorylation, Calvin cycle, C4 & CAM path way, photorespiration and factors affecting photosynthesis.

**Respiration:** aerobic, anaerobic & fermentation, glycolysis, Krebs cycle, electron transport system, redox potential, oxidative phosphorylation, pentose phosphate pathway. Respiratory quotient (RQ) and factor affecting respiration.

##### UNIT-III

10 Hours

Nitrogen fixation, importance of nitrate reductase, its regulation and ammonium assimilation.

Growth-Photomorphogenesis: photoperiodism (phytochrome, vernalization & concept of biological clock, seed dormancy- causes and methods of breaking dormancy, Stress physiology- concept and plant responses to water, salt and temperature stresses.

Growth regulators: physiological roles of Auxins, Gibberellins, Cytokinins, ABA,

Ethylene & growth inhibitors.

##### UNIT-IV

10 Hours

**Thermodynamics:** Principles, free energy, energy rich bonds phosphoryl group transfer and ATP. Enzymes: Classification, nomenclature (IUBMB) and properties; co-factors and coenzymes, isozymes, mechanism of enzyme action, enzyme inhibition, enzyme kinetics (Michaelis-Menten equation).

**Proteins:** structure and classification of amino-acids, primary, secondary, tertiary and quaternary structure of proteins.

**Carbohydrates:** structure of mono, di and polysaccharides, stereoisomers, enantiomers and epimers.

**Lipids:** structure of lipid (simple and compound) phospho and glycolipids, fatty acid, saturated and non-saturated.

##### UNIT-V

10 Hours

General account: Pharmacognosy & its importance in modern medicine, Crude drugs, Classification of drugs- Chemical & Pharmacological. Drug evaluation -Organoleptic, Microscopic, Chemical, Physical & Biological

Secondary metabolites: Definition of secondary metabolites & difference with primary





metabolites. Interrelationship of basic metabolic pathway with secondary metabolite Biosynthesis (outline only), major types – terpenoids alkaloids & their protective action against pathogenic microbes & herbivores.  
Pharmacologically active constituents: Source plants (one example) parts used & uses of  
1. Steroids (diosgenin, digitoxin)  
2. Tannins (catechin), resins (gingerol, curcuminoids)  
3. Alkaloids (quinine, strychnine, reserpine, vincblastin).

### B.Sc. II – SEMESTER Practicals

Total number of hours per week: 04, Internal Assessment=10 Marks; Max. Marks: 40 Marks

1. Study of permeability of membrane using different concentration of Organic solvents.
2. Detection of proteins in pulses and cereals by biochemical tests.
3. Separation of chloroplast pigments by solvent method.
4. Determination of osmotic potential of cell sap by plasmolytic /Gravimetric method.
5. Determination of rate of transpiration by using Ganong's /Farmer's potometer.
6. Determination of rate of photosynthesis at different wavelengths and concentration of CO<sub>2</sub>.
7. Determination of RQ of carbohydrates, fats and proteins.
8. Study of hydrotropism, geotropism, phototropism and nastic movements.
9. Study of plant drugs- plant parts used as drugs, powder drugs and steps for examination.
10. Microscopic features of some common powder drugs  
a. Adathoda b. Ginger c. Alstonia bark.
11. Detection of carbohydrates, fats, oils, alkaloids, enzyme activity in plant tissue.
12. Test for detection of inorganic elements in plant ash.

### Suggested Reading.

1. Plant Physiology – S.K. Verma - S.Chand Publication
2. Plant Physiology – S. M. Mukherjee & A.K. Ghosh - New Central Book Agency, Calcutta.
3. College Botany Vol. I- Gangulee Das & Dana
4. College Botany Vol. II- S. Sunder Rajan – Himalaya Publication, Hyderabad.
5. Biochemistry – V. Satyanarayan & V. Chakrapani – Books & Article (P) Ltd., Kolkata.
6. Biochemistry – Amit Krishna DE – S. Chand & Comp, Delhi.
7. Elementary Biochemistry – J. L. Jain, Sanjay Jain- S. Chand & Com. Ltd. Delhi.
8. Biochemistry - Lubert Stryer – CBS Publishers and Distributors, Bholanath Nagar, Shahdara, Delhi.
9. Cell physiology and Biochemistry – William D. Meulroy - Prentice-Hall of India Private Limited, New Delhi.
10. Book of Pharmacognosy- K.R. Argumugum & N. Murugesu – Sathya Publishers (1993).
11. Text Book of Pharmacognosy- T.E. Wallis Vth Edition – CBS Publishers & Distributors, Delhi.



## 12. ZOOLOGY (Optional)

**BSc II Semester Scheme (CBSC - Pattern)**  
**Zoology (Optional) Syllabus(Revised)**  
**2017 -18 Onwards**

Semesters	Syllabus	Total Hours	Theory & Practical/ Week
II	<b>BIOLOGY OF CHORDATES</b>	50hrs.	4 hrs.
	<b>PRACTICAL</b>	12	4 hrs.

**NOTE:**

THEORY MARKS			PRACTICAL MARKS		
Internal	Annual	Total Marks	Internal	Annual	Total Marks
20	80	100 marks	10	40	50 marks

**Question paper pattern for THEORY examination**

Que.No.	Marks	Solve	Total Marks
I	02	10	20
II	04	05	20
III	10	04	40
<b>TOTAL --- 80 MARKS</b>			

**PRACTICAL pattern for examination**

Que.No.	Solve	Total Marks
I	Dissection (Explain any one system)	08
II	Mounting	04
III	Comparative Anatomy	06
IV	Identification / Spotting ( Six)	12
V	Project Report	05
VI	Journal	05
<b>TOTAL --- 40 MARKS</b>		





# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

WEL-COME

TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.Sc

**III Semester**



## 10. Physics (Optional)

B.Sc. III Semester  
PHYSICS(Optional)  
(w.e.f.2018-19)

Physics 3.1: GEOMETRICAL OPTICS AND ELECTRICITY I. ( Total Hours: 50 Hrs.)  
SUBJECT CODE: 17BSCPHYT31

### UNIT I

#### GEOMETRICAL OPTICS:

Fermat's principle-statement and explanation, derivation of laws of reflection and refraction.

Abbe's sine rule (derivation), Lagrange and Helmholtz's relation ( derivation

). Problems.

(4 + 1 = 5 hours)

#### CARDINAL POINTS:

Cardinal points of optical system: Principal foci, principal points and nodal points. Newton's formula and graphical construction of image. Equivalent focal length of two thin lenses separated by a distance (derivation) and location of Cardinal Points. Thick lens and power of thick lens.

Problems.

(4 + 1 = 5 hours)

### UNIT II

#### ABERRATIONS:

Spherical (longitudinal and lateral), chromatic (longitudinal and lateral) aberrations. Methods to reduce spherical aberration ( qualitative ) condition for Achromatism of two thin lenses in contact and separated by a distance.

Ramsden's and Huygen's eye-pieces: Construction and location of cardinal points

. Problems.

(4 + 1 = 5 hours)

#### DYNAMICS OF CHARGED PARTICLES:

Charged particles in a uniform (static) electric field applied along the direction of particle motion. Energy acquired during the motion of a charged particle

in uniform transverse electric field. Charged particle moving in a constant uniform magnetic field.

Problems.

(4 + 1 = 5 hours)



## UNIT III

### DIELECTRICS:

Electric polarization. Gauss law (vector form) in dielectrics and electric displacement. Boundary conditions at a surface separating two dielectric media (derivation). Relation between Electric Displacement (  $D$  ), Electric Field (  $E$  ) and Polarization (  $P$  ). Atomic Polarizability, electric susceptibility, relation between Electric constant and electric susceptibility.

Expression for mechanical stress on surface of charged conductor. Application to electrified soap bubble. Expression for electrostatic energy in a medium surrounding charged conductor. Derivation of Clausius – Mosotti equation and its limitations.

Experimental determination of dielectric constant of a solid by Hopkinsons's Null Method.

Problems.

(8 + 2 = 10 hours)

## UNIT IV

### CURRENT ELECTRICITY

Statement of Biot – Savart's Law. Derivation of expression for magnetic field due to a straight conductor carrying current. Mention of expression of variation of magnetic field along the axis of a circular coil, tangent law, determination of  $B_H$ . Helmholtz Galvanometer: Principle, Construction and Working.

Problems.

(3 + 1 = 4 hours)

### TRANSIENT CURRENTS

Theory of growth and decay of current through RL circuit. Theory of charging and discharging of capacitor through RC circuit. Time constants of RL and RC circuits. LCR circuit ( Discussion of special cases ). Measurement of high resistance by leakage method.

Problems.

(3 + 1 = 4 hours)

## UNIT V

### ELECTRICAL INSTRUMENTS AND MEASUREMENTS:

Ballistic galvanometer: Condition for moving coil galvanometer to be ballistic and dead beat. Theory of BG. Charge Sensitivity, volt sensitivity and current sensitivity and their relations. Determination of self inductance (  $L$  ) by Rayleigh's method with necessary theory. Theory of earth inductor. Determination of  $B_H$ ,  $B_V$  and  $\Phi$ . CRO  $l_o k$  diagram.

Use of CRO in the measurement of Voltage, Frequency and Phase. Problems.

(9 + 1 = 10 hours)



**PHYSICS 3.2 : LAB – III**  
**SUBJECT CODE: 17BSCPHYP32**

**LIST OF EXPERIMENTS**

1. Calibration of Spectrometer.
2. Dispersive Curve and Dispersive Power.
3. Searl's Goniometer.
4. Turn Table.
5. Determination of Magnetic Field along the axis of a coil.
6. Helmholtz Galvanometer.
7. Determination of the constants of B.G.
8. Determination of High Resistance by the Leakage method.
9. Measurement of the capacity by the method of Mixtures.
10. Use of CRO in the measurement of Voltage, Frequency and Phase.
11. Time constant by RL/RC circuits.
12. Determination of self inductance by Rayleigh's method.

**NOTE:**

1. Experiments are of Four hours duration.
2. Minimum of Eight experiments to be performed.

**REFERENCE BOOKS:**

1. Principles of Optics (I-Edition) –B.K.Mathur (New Gopal Printing Press, 1962).
2. Fundamentals of Optics (V-Edition) – Khanna and Bedi (R.Chand, New Delhi).
3. A text book of Optics (I-Edition) – Brij Lal and Subramanyam (S.Chand).
4. Optics (IV-Edition) – Ajoy Ghatak (Tata McGraw Hill, 2006).
5. Fundamentals of Optics (III Edition) –Jenkins White (Tata McGraw Hill,1957).
6. Geometrical Optics (I-Edition) – D.P.Acharya (Oxford & IBH Pub. Co., 1970).
7. Optics and Spectroscopy (VI Edition) – Murugesan, Kiruthiga and ShivaPrasad (S.Chand).
8. Geometrical Optics – A. Verstraetin.



### 3. CHEMISTRY (Optional)

TEACHING HOURS : 50 HOURS

#### INORGANIC CHEMISTRY

##### Metallurgy

09 hours

Review of steps involved in metallurgical process, thermodynamic concepts of selection of reducing agents using Ellingham diagrams, relative efficiency of carbon and carbon monoxide as reducing agent.

Reducing agents for Chromic oxide and zinc oxide.

Extraction of nickel by Mond's process, lead by carbon reduction process, aluminum from bauxite.

Powder metallurgy - Production of tungsten powder from wolframite.

##### Solvents

04 hours

Types, properties of good solvents, non-aqueous solvents - Liquid  $\text{NH}_3$  and liquid  $\text{HF}$ , (properties like solvation, acid-base, redox, complex formation and precipitation), water as universal solvent, leveling effect.

##### Acids and Bases

04 hours

Arrhenius, Bronsted-Lowry, Lux-Flood, solvent system and Lewis concepts of acids and bases. Hard and soft acids and bases(HSAB) - classification of acids and bases as hard and soft, Pearson's HSAB concept.

#### ORGANIC CHEMISTRY

##### Orientation

03 hours

Review of inductive, electromeric, resonance and hyperconjugation effects, activating and deactivating groups, orientation of substituent in aromatic compounds with different functional groups like  $-\text{OH}$ ,  $-\text{NH}_2$ ,  $-\text{Cl}$ ,  $-\text{NO}_2$ ,  $-\text{CH}_3$  and  $-\text{COOH}$  in halogenation and nitration reactions (only electronic interpretation)

##### Alcohols

04 hours

Introduction and nomenclature of dihydric and trihydric alcohols, preparation of glycol from ethene, oxidative cleavage of ethylene glycol with lead tetra acetate and per iodic acid, pinacol-pinacolone rearrangement, preparation of glycerol from propene, synthesis and uses of nitroglycerine, composition and uses of dynamite and cordite, distinction between primary, secondary and tertiary alcohols by Lucas reagent.



**Phenols****04 hours**

Classification and nomenclature, acidic character of phenol compared to alcohol and cyclohexenol, mechanism of Fries rearrangement, Claisen rearrangement, Elbs persulphate oxidation and Lederer-Manasse reaction, synthesis and uses of *n*-hexyl resorcinol and picric acid, structure and uses of dettol.

**Organometallic compounds****02 hours**

Synthesis of methyl magnesium iodide and its synthetic applications in the preparation of alcohols (primary, secondary and tertiary) aldehyde, ketone, ester, carboxylic acid, amines and alkanes.

Organo-lithium compounds: Preparation of Lithium dialkylcuprate and synthesis of higher alkane from it.

**PHYSICAL CHEMISTRY****Colligative properties****07 hours**

Raoult's law, concept of lowering of vapour pressure, elevation of boiling point, depression in freezing point and osmotic pressure, derivation of  $K_b$  and  $K_f$  by thermodynamic treatment, experimental determination of molecular weight by - Landsberger's method, Beckmann's method, Berkely and Hartley method. Numerical problems.

**Infrared spectroscopy****03 hours**

Principle, types of vibrations, identification of following organic compounds by stretching frequencies - Alkanes, alkenes, alkynes, benzene, aldehydes, ketone, alcohol, thiols, acids, esters, amines, problems based on molecular formula and stretching frequency.

**Second law of thermodynamics****10 hours**

Statement, cyclic process, Carnot's cycle, heat engine and its efficiency, Carnot's theorem, entropy and its significance, entropy changes in reversible and irreversible process for ideal gases, free energy, dependence of free energy on pressure and temperature, Gibb's-Helmholtz equation, Clausius-Clapeyron equation and its applications, problems on above, partial molal quantities, chemical potential of an ideal gas.





**B.Sc. III SEMESTER  
CHEMISTRY PRACTICALS**

Total number of hours per week: 04

Internal Assessment= 10 Marks

Total No. of hours per Semester: 52

Practicals: 40 Marks

**A. Physical Chemistry Experiments (Non-instrumental)**

01. To study the effect of acid strength on hydrolysis of methyl acetate using HCl and  $H_2SO_4$ .
02. a) To determine the rate constant of second order reaction.  
 $KI + K_2S_2O_8$  ( $a=b$ )  
b) Effect of concentration on rate constant of second order reaction.
03. Adsorption of acetic acid on animal charcoal.
04. a) Determination of surface tension and parachor of benzene series.  
b) Determination of surface tension and parachor of alcohol series.
05. Determination of viscosity of liquids of Ostwald's method.
06. Determination of viscosity of binary liquid mixtures and finding the percentage composition unknown.
07. To study distribution of iodine or benzoic acid between water and benzene.
08. Determination of equilibrium constant of distribution of iodine between KI and  $CCl_4$ .
09. Determination of molecular weight of urea by Landbergers method.
10. Determination of degree of dissociation of KCl by Landbergers method.



## 9. MATHEMATICS (Optional)

MATHEMATICS SYLLABUS FOR THE ACADEMIC YEAR 2015-2016 ONWARDS  
B.SC III SEMESTER

### PAPER I: MATHEMATICAL LOGIC & REAL ANALYSIS

TOTAL TEACHING HOURS: 50 TEACHING HOURS PER WEEK: 05

#### UNIT-I

**Mathematical Logic:** (Recapitulation of basic definitions) tautology and Contradiction, logical equivalence, Converse, inverse and Contra-positive of an implication, Mathematical structures, Existential & universal quantifiers, methods of proofs. **10 hours**

#### UNIT-II

**Real Analysis-I:** Jacobians, Properties and examples, Lagrange's mean value theorem for functions of two variables, Taylor's (only statement) and Maclaurian's theorems for two variables. **10 Hours**

#### UNIT-III

**Real Analysis-II:** Maxima and Minima of two and three variables, Necessary and sufficient condition for extreme values of two variables, Lagrange's method undetermined multipliers. **10 Hours**

#### UNIT-IV

**Sequences-I:** Sequences, Limit of a sequences, Bounded and unbounded sequences, Convergent, Divergent, and Oscillatory sequences, Algebra of convergent sequences, Monotonic sequences, Theorems on monotonic sequences. **10 Hours**

#### UNIT-V

**Sequences-II:** Cauchy's sequences, Cauchy's first and second theorems on limits, Cauchy's criterion for convergence of sequences, Subsequences, (definition & example) **10 Hours**

#### References:

- (1) Shanti Narayana and P K Mittal: Textbook of Mathematical analysis.
- (2) Nisha Rani and Gupta: Textbook of real analysis.
- (3) N P Ball: Real analysis (Golden Series)
- (4) J N Sharma and A R Vasistha: Real analysis.
- (5) G. K. Ranganath: A text book of College Mathematics.



## B.SC III SEMESTER

### PAPER II: GROUP THEORY, INTEGRAL CALCULUS & DIFFERENTIAL EQUATIONS

TOTAL TEACHING HOURS: 50 TEACHING HOURS PER WEEK: 05

#### UNIT-I

**Group Theory-I:** Groups, Abelian group, Standard examples of groups, Properties of groups, Semi groups, Subgroups and its properties, Permutation group. **10 Hours**

#### UNIT-II

**Group Theory -II :** Cyclic groups & its properties, Cosets, Lagrange's theorem, Euler's theorem and Fermet's theorem. **10 Hours**

#### UNIT-III

**Applications of Definite Integrals:** Application of integration for finding the lengths of arc, Surface areas and volume of solids of revolution for standard curves whose equations are given in Cartesian, polar and parametric forms. **10 Hours**

#### UNIT-IV

**Differential equation-I:** First order first degree equations: linear differential equation, Homogeneous and reducible to homogeneous forms, Bernoulli's form, Exact equations; Necessary and sufficient condition for the equation to be exact, solution of differential equation by finding a suitable integrating factor. **10 Hours**

#### UNIT-V

**Differential equation-II:** Differential equations of the first order: higher degree, Solvable for  $p$ , Solvable for  $x$ , Solvable for  $y$ , Clairaut's equations reducible to Clairaut's form. **10 Hours**

#### References:

- (1) Shanti Narayana: Textbook of Integral Calculus.
- (2) Shanti Narayana: Textbook of Modern Abstract Algebra.
- (3) D. Murray: Introductory Course in Differential Equations.
- (4) Ayres F: Differential Equations.
- (5) G. K. Ranganath: A text book of College Mathematics
- (6) Herstein I. N: Topics in Algebra.



# Group – II

## OPTIONAL / COMPULSORY SUBJECT FOR THE DEGREE IN SCIENCE SUBJECTS

Science Subjects: (any three subject of equal importance to be chosen as per the grouping given by Rani Channamma University, Belagavi)  
DETAILED SYLLABUS OF FOLLOWING PAPERS WITH PRACTICALS

### 1. BOTANY (optional)

**B.Sc. III Semester** (w.e.f. 2018 – 19) and onwards.

**Subject: BOTANY (optional)**

<b>Paper:- Diversity of Cryptogams (Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms).</b>	<b>52 Hrs.</b>
<b>Unit I: Algae</b>	<b>10 hrs.</b>
General characters, Pigmentation, Classification by Fritsch (up to class level); Distribution, thallus structure, reproduction and life cycle of Nostoc, Volvox, Gelidium, Sargassum and Batrachospermum. Economic importance.	
<b>Unit II: Fungi</b>	<b>08 hrs.</b>
General characters, Classification (Alexopoulos's system); Distribution, Structure, Reproduction and life cycle of Albugo, Rhizopus, Penicillium and Puccinia. Economic importance of fungi. General account of lichens.	
<b>Unit III: Plant Pathology</b>	<b>06 hrs.</b>
General account of Bacteria and Viruses. Introduction and general symptoms of plant diseases. Symptoms, Pathogens and control measures of Late blight of potato, White rust of crucifers, Tikka disease of ground nut.	
<b>Unit IV: Bryophytes</b>	<b>06 hrs.</b>
General characters, Classification (Smith), Structure; reproduction and schematic life cycle of Riccia, Anthoceros and Funaria. (Developmental details are not expected). Evolution of sporophytes.	
<b>Unit V: Pteridophytes</b>	<b>10 hrs.</b>
General characters and classification. Distribution, Structure (External and Internal) and Reproduction of Psilotum, Selaginella, Equisetum and Nephrolepis (Developmental details are not expected). Stele evolution, Heterospory and seed habit.	
<b>Unit VI: Gymnosperms</b>	<b>08 hrs.</b>
General characters and classification; Distribution, Structure (External and Internal) and Reproduction of Cycas, Pinus and Gnetum (Developmental details are not expected).	
<b>Unit VII: Paleobotany</b>	<b>04 hrs.</b>
Geological time scale; fossilization-molds, impression; Petrification and cast. Study of fossils - Calamita, Lepidodendron, Lygenoptera.	



## 11. ZOOLOGY (Optional)

BSc III Semester Scheme (CBSC - Pattern)

Zoology (Optional) Syllabus(Revised)

2018 -19 Onwards

Semesters	Syllabus	Total Hours	Theory & Practical/ Week
III	Development biology, Animal Physiology & Biochemistry	50hrs.	4 hrs.
	PRACTICAL	12	4 hrs.

### NOTE:

THEORY MARKS			PRACTICAL MARKS		
Internal	Annual	Total Marks	Internal	Annual	Total Marks
20	80	100 marks	10	40	50 marks

### Question paper pattern for THEORY examination

Que.No.	Marks	Solve	Total Marks
I	02	10	20
II	04	05	20
III	10	04	40
<b>TOTAL --- 80 MARKS</b>			

### PRACTICAL pattern for examination

Que.No.	Solve	Total Marks
I	Physiology(Qualitative Test)	07
II	Chick Embryo Mounting	07
III	Normal / Abnormal Urine Test	05
IV	Identification / Spotting ( Four)	08
V	Preparation of Haematin Crystals/ Estimation of haemoglobin by Sahli's method.	05
VI	Submission of Chick Embryo slides	03
VII	Journal	05
<b>TOTAL --- 40 MARKS</b>		





# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**WEL-COME**

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.Sc**

**IV Semester**

**w.e.f.**

**Academic Year 2015-16 and onwards**



## 10. PHYSICS (Optional)

PHYSICS (Optional)

Physics 4.1: PHYSICAL OPTICS AND ELECTRICITY II. (Total Hours : 50 )

17BSCPHYT41

### UNIT – I

#### INTERFERENCE

Interference due to division of wave front: Fresnel's bi-prism- Determination of wavelength of monochromatic light.

Interference due to division of amplitude: Stokes' treatment of reflection and transmission at interface.

Thin Films, Conditions for maxima and minima in case of reflected light (derivation ). Multiple reflections. Mention of conditions for maxima and minima in case of transmitted light. Theory of Newton's Rings (derivation).

Michelson's Interferometer: Construction and working ,Formation of circular and straight fringes ( qualitative ). Determination of wavelength of monochromatic light.

*Problems.*

(8 + 2 = 10 hours)



## UNIT – II

### DIFFRACTION

Fresnel's class:

Fresnel's theory of half-period zones considering plane waves, rectilinear propagation of light. Zone plate: Construction, theory, expression for focal length.

*Problems.*

(3 + 1 = 4 hours)

}

Fraunhofer class:

Comparison of Fresnel and Fraunhofer class of diffractions, Composition of 'n' number of SHMs of same amplitude and period having their phases increasing in arithmetic progression, Diffraction at Single Slit, Plane Transmission grating and its theory, Dispersive power of grating, Resolving power of prism and grating (derivation).

*Problems.*

(5 + 1 = 6 hours )

## UNIT – III

### POLARISATION:

Analytical treatment of circularly and elliptically polarized light, Huygens theory of double refraction, Positive and negative crystals, Retardation Plates.

Quarter wave plate, Half wave plate, Production and Analysis of plane, circularly and elliptically polarized light.

Optical activity:

Fresnel's theory of rotatory polarization ( qualitative ),  
Laurent's half shade polarimeter, optical activity, specific rotation.

*Problems.*

(6 + 1 = 7 hours)





### ALTERNATING CURRENT:

Operator 'j'. Argand diagram. LCR series circuit.-Expression for current, impedance and Phase ( using 'j' operator method ). Condition for resonance frequency, band width, quality factor and their relation (qualitative).

LCR parallel circuit- Expression for admittance and condition for Resonance (using 'j' operator method ).

Problems.

( 5 + 1 = 6 hours )

## UNIT – IV

### THERMO-ELECTRICITY:

Seebeck Effect and its explanation. Variation of emf with temperature, Neutral Temperature and Temperature of inversion; Thermo-electric Series, Laws of Thermo-Electric effects, Peltier Effect-explanation, Peltier's Coefficients and thermodynamics of Peltier's Effect. Thomson Effect - explanation. Thomson Coefficient.

Derivation of the relation  $\pi = -T dE/dT$  and  $\sigma_e - \sigma_i = T d^2e/dT^2$

Thermo-Electric ( Tait) diagrams, its applications to determine,

1. Total emf,
2. Peltier emf,
3. Thomson emf
4. Neutral temperature and
5. Temperature of inversion.

Problems.

( 8 + 2 = 10 hours )



## UNIT – V

### ELECTROMAGNETIC THEORY:

Mathematical background: gradient of scalar, divergence and curl of vector and their physical significance. Gauss Law, Stokes' and Green's Theorem (without proof).

#### Maxwell's equations:

Derivation of Maxwell's equations in differential forms. Mention of integral forms and their physical significance. Derivation of general Plane Wave equations in free space. Transverse nature of radiation. Poynting theorem (derivation).

### PHYSICS 4.2 LAB – IV

performed

## 17BSCPHY42

(7 hours)

### LIST OF EXPERIMENTS

1. LCR Series Resonance Circuit.
2. LCR Parallel Resonance Circuit.
3. Comparison of Capacity by De Sauty's method.
4. Determination of L and C by equal voltage method.
5. Newton's Rings.
6. Fresnel's Bi-prism – Determination of Wavelength of monochromatic light.
7. Resolving Power of Telescope.
8. Resolving Power of Grating.
9. Resolving Power of Prism.
10. Thermo-Electric power of thermo-couple.
11. Determination of Wavelength of monochromatic light by Single Slit/  
a. plane transmission grating
12. Polarimeter.

#### NOTE:

1. Experiments are of Four hours duration.
2. Minimum of Eight experiments to be



### 3. CHEMISTRY (Optional)

B.Sc. IV SEMESTER W.E.F. 2018-19

#### CHEMISTRY

TEACHING HOURS : 50 HOURS

#### INORGANIC CHEMISTRY

##### Chemistry of d and f block elements

06 hours

General characteristics of d block elements- Electronic configuration, oxidation states, metallic property, colour, reactivity, reducing property, magnetic, catalytic and complex formation properties.

General characteristics of f block elements - Electronic configuration, cause and consequences of lanthanide contraction.

General features of actinides- electronic configuration, oxidation state, extraction of uranium from pitchblende.

##### Bioinorganic Chemistry

04 hours

Essential and trace elements in biological process, metalloporphyrins with respect to haemoglobin and chlorophyll(structure and function), biological role of Na, K, Fe and Zn.

##### Environmental Chemistry

07 hours

**Air pollution:** Types of pollutants, sources and control measures- CO, CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, H<sub>2</sub>S, hydrocarbons, CFC's and particulates, pesticides, and their adverse effects.

**Water pollution:** Types of pollutants, sources and adverse effects (sewage, infectious agents, organic chemicals and inorganic mineral oils and sediments)

Parameters of water pollution - Dissolved oxygen(DO), biological oxygen demand(BOD) and chemical oxygen demand(COD), definitions and their determinations. Treatment of sewage and industrial effluents - Preliminary, primary and secondary treatment(Aerated lagoons, trickling filters and activated sludge)

#### ORGANIC CHEMISTRY

##### Aldehydes and Ketones

05 hours

Nomenclature, structure and Bonding, mechanism of nucleophilic addition reactions-Hydrogen cyanide, hydroxyl amine, acetal formation-with ethanol and ethylene glycol.

Mechanism of the following reactions:

- Aldol condensation
- Cannizzarro's reaction
- Claisen-Schmidt reaction



- d) Perkin's reaction
- e) Benzoin condensation
- f) Baeyer-Villiger oxidation of ketones.
- g) Mannich reaction, Synthesis of Coumarin and Vanillin.

**Carboxylic Acids** **05 hours**

Nomenclature, structure and bonding, acid strengths of mono, di and tri-chloroacetic acids and nitro, chloro and hydroxy substituted benzoic acids; mechanism of esterification and hydrolysis of ester (Aac2 and Bac2).  
 Reactions of carboxylic acids - i) Conversion into acid derivatives (acid chlorides, amides, esters and anhydrides), ii) Curtius rearrangement, iii) Reaction with organometallic compounds and iv) Hell-Volhard-Zelinsky reaction.

**Aromatic Amines** **04 hours**

Classification, distinction between primary, secondary and tertiary amines by nitrous acid test, comparison of basic character of methyl amine, aniline and cyclohexylamine, amine salts as phase transfer catalysts, mechanism of Hoffmann rearrangement, Gabriel phthalimide reaction, diazotisation, synthetic applications of diazonium salts-reduction, Sandmeyer's reaction, coupling reactions.

**Ethers and Epoxides** **03 hours**

**Ethers:** Nomenclature of ethers and their methods of preparation, chemical reactions - Reaction with HI, hot and cold taking symmetric and unsymmetrical ethers.

**Crown ethers:** Definition, examples, use of crown ethers as phase transfer catalysts.

**Epoxides:** Synthesis of 1,2-epoxy ethane and 1,2-epoxycyclopentane, acid catalysed ring opening of 1,2-epoxycyclopentane in aqueous solution.

## PHYSICAL CHEMISTRY

**Electrochemistry** **08 hours**

Debye-Huckel's theory, Debye-Huckel equation for strong electrolytes (no derivation).

Applications of conductance measurements-

- a) Determination of solubility product of sparingly soluble salts
  - b) Conductometric titrations - types of acid-base titrations and precipitation titrations
  - c) Determination of degree of dissociation of weak electrolytes
- Ionic mobility, transport number and its determination by Hittorff's method

**Chemical Kinetics** **08 hours**

Second order reaction with examples, derivation of rate constant equation of second order reaction when concentration of the reactions are equal ( $a=b$ ), half life period, determination of order of reaction by

- a) Differential equation method
- b) Half life method



**Simple collision theory of reaction rates:** Derivation of rate constants of unimolecular(Lindemann hypothesis) and bimolecular reaction rates, limitations of collision theory.

**Transition state theory:** Theory

Comparison of transition state theory and collision theory, steric factor.

**Chemical kinetics of complex reactions:** first order reaction, opposing, consecutive and parallel reactions.

#### REFERENCE BOOKS

##### Inorganic chemistry

- |                                 |                            |
|---------------------------------|----------------------------|
| 1. Advanced Inorganic Chemistry | Gurdeep Raj                |
| 2. Basic Inorganic Chemistry    | Alber Cotton and Wilkinson |
| 3. Inorganic Chemistry          | James Huheey               |
| 4. Modern Inorganic Chemistry   | R.D. Madan                 |
| 5. Inorganic Chemistry          | J.D. Lee                   |
| 6. Environmental Chemistry      | A.K. Dey                   |
| 7. Environmental Chemistry      | H. Kour                    |

##### Organic chemistry:

- |                      |                    |
|----------------------|--------------------|
| 1. Organic Chemistry | Wade               |
| 2. Organic Chemistry | J.L. Finar Vol-I   |
| 3. Organic Chemistry | Morrison and Boyd  |
| 4. Organic Chemistry | Bahl and Tuli      |
| 5. Organic Chemistry | Bahl and Arun Bahl |

##### Physical chemistry

- |                          |           |
|--------------------------|-----------|
| 1. Electrochemistry      | Glasstone |
| 2. Physical Chemistry    | Atkins    |
| 3. Engineering Chemistry | Jain      |

#### B.Sc. IV SEMESTER CHEMISTRY PRACTICALS

Total number of hours per week: 04

Internal Assessment=10 Marks

Total No. of hours per Semester: 52

Practicals: 40 Marks



- Co.
5. Gerald Karp "Cell Biology" McGraw Hill Book Co. New York.
  6. Gillor.B.R.And Pasternak.J.J.1994 "Molecular Biotechnology Principles and Applications of Recombinant DNA American Society for Microbiology. Washington DC.
  7. Nichol, D S F 1994 "An introduction to Genetic Engineering "Cambridge University Press.
  8. Peters P 1993 "A Guide to Genetic Engineering" Dubuque Iowa WMC Brown.
  9. Rigbu P.W.J 1987 "Genetic Engineering- VI Academic Press Inc, Florids,USA.
  10. Salle. A.J. "Fundamentals Principles of Bacteriology" Tata McGraw Hill Publishing Company Ltd. New Delhi.
  11. Smith "Molecular Biology "Faber and Faber Publications.
  12. Stainer, R.Y. Ingraham J.L. "General Microbiology" Prentice Hall of India Pvt.Ltd.,New Delhi.
  13. Watson James D "Recombinant DNA " Scientific American Books, New York.

## 9. MATHEMATICS (Optional) – IV Sem

MATHEMATICS SYLLABUS FOR THE ACADEMIC YEAR 2015-2016 ONWARDS

B.SC IV SEMESTER

**PAPER I: VECTOR CALCULUS AND INFINITE SERIES**

TOTAL TEACHING HOURS: 50 TEACHING HOURS PER WEEK: 05

UNIT-I

Dot and cross product of vectors. Ordinary derivatives of vectors. Continuity and differentiability of a vector function. Derivatives of sum. Dot product. Cross product and Triple product of vectors. Constant vector functions. Partial



differentiation of vector functions.

10 Hours

#### UNIT-II

The vector differential operator  $\text{del}$ . The gradient of a scalar point function. The directional derivative of function. Properties of gradient of vector function. Divergence and Curl of a vector point function. Properties of divergence and curl.

10 Hours

#### UNIT-III

**Infinite series I:** Infinite series and examples. Convergent, Divergent and Oscillatory series. Partial sum of series. Series of non-negative terms. Necessary and sufficient condition for convergence. Cauchy's general principle of convergence. Geometric series. The P-series (Harmonic). Comparison tests (different forms). 10 Hours

#### UNIT-IV

**Infinite series II:** D'Alembert's ratio test, Raabe's test, Cauchy's integral test and Root test.

10 Hours

**Infinite series III:** Absolute convergence and conditional convergence of series. Alternating series, Leibnitz theorem, Uniform convergence. 10 Hours

#### References:

- (1) Murray R. Spiegel: VECTOR ANALYSIS.
- (2) Walter Rudin: Principles of Mathematical analysis.
- (3) N. P. Bali: Real Analysis.
- (4) Shanti Narayana: Mathematical Analysis.
- (5) G. K. Ranganath: Textbook of B.Sc. Mathematics.
- (6) N. Rudraiah and others: College Mathematics.

### B.SC IV SEMESTER

#### PAPER II: GROUP THEORY, FOURIER SERIES AND DIFFERENTIAL EQUATIONS

TOTAL TEACHING HOURS: 50 TEACHING HOURS PER WEEK: 05

#### UNIT-I

**Group Theory III:** Normal sub-groups, Quotient groups, Homomorphism and



Isomorphism of groups, Kernel of Homomorphism, Fundamental theorem of Homomorphism. 10 Hours

#### UNIT-II

**Fourier series:** Periodic functions, Fourier series of functions of period  $2\pi$  and  $2l$ . Fourier series of odd and even functions, half range sine and cosine series. 10 Hours

#### UNIT-III

**Fourier transforms:** Finite sine and Cosine transforms. 10 Hours

#### UNIT-IV

**Differential Equations III:** Linear differential equation of  $n^{\text{th}}$  order with constant co-efficients. Particular integral when RHS is of the form  $e^{ax}$ ,  $\sin ax$ ,  $\cos ax$ ,  $x^n$ ,  $e^{ax}$  and  $xv$

where  $v$  is function of  $x$ .

10 Hours

#### UNIT-V

**Differential Equations IV:** Homogeneous linear differential equation of  $n^{\text{th}}$  order and Equation reducible to the homogeneous linear form, higher order exact differential equations.

**References:**

- (1) Herstein I. N: Topics in Algebra.
- (2) N. P. Bali: Differential equations.
- (3) Shanti Narayana: Mathematical Analysis.
- (4) G. K. Ranganath: Textbook of B.Sc. Mathematics.
- (5) N. Rudraiah and others: College Mathematics.

#### MATHEMATICS SYLLABUS FOR THE ACADEMIC YEAR 2015-2016

**ONWARDS Distribution of Marks**

Unit	2 Marks	5 Marks	10 Marks	Total
I	3	1	1	21
II	3	1	1	21
III	2	2	1	24
IV	2	2	1	24
V	12 (24 Marks)	8 (40 Marks)	1	24





# Group – II

OPTIONAL / COMPULSORY SUBJECT FOR THE DEGREE IN SCIENCE SUBJECTS

Science Subjects: (any three subject of equal importance to be chosen as per the grouping given by Rani Channamma University, Belagavi)

DETAILED SYLLABUS OF FOLLOWING PAPERS WITH PRACTICALS

## 1. BOTANY (optional)

### SEMESTER-IV

I DIVERSITY OF ANGIOSPERMS AND THEIR SYSTEMATICS 60 hrs

#### Section - I

#### Morphology and Taxonomy

Unit 1: Angiosperms: origin and evolution. 2 hrs

Unit 2: Morphology of Angiosperms – Study of roots, stems, leaves and their modifications.

Study of Inflorescence, flower and fruits.

10 hrs.

Unit 3: Angiosperm taxonomy: Brief history, botanical nomenclature, principles and

rules, taxonomic ranks, type concept and principle of priority.

4 hrs.

Unit 4: Classification of Angiosperms : systems proposed by Bentham and Hooker and Engler prantl. Their salient features, merits and demerits. Major contributions of cytology (cytotaxonomy), phytochemistry (chemotaxonomy) and taximetrics (numerical taxonomy) to taxonomy.

6 hrs.

Unit 5: Diversity of flowering plants as illustrated by members of the following families: Magnoliaceae, Annonaceae, Brassicaceae, Malvaceae, Rutaceae, Rhamnaceae, Anacardiaceae, Fabaceae, Myrtaceae, Euphorbiaceae, Cucurbitaceae, Apiceae, Rubiaceae, Asteraceae, Sapotaceae, Apocynaceae, Asclepiadaceae, Convolvulaceae, Solanaceae, Acanthaceae, Verberaceae, Lamiaceae.



Amaranthaceae, Euphorbiaceae, Urticaceae, Orchidaceae, Amaryllidaceae, Uliaceae, Araceae and Poaceae.

24 hrs

## Section - II

### Economic Botany and Medicinal botany

#### Economic Botany:

**Food plants:** Rice, Wheat, Maize, Pulses, Potato and Sugarcane

**Fibres:** Cotton, Jute, Agave and Deccan hemp

**Vegetable oils:** Ground nut, Sunflower, Coconut, Palm oil and Castor

**General account and sources of Timber:** Teak and Sissoo

**Paper & pulp:** Bamboo & Eucalyptus

**Spices:** Ginger, Cinnamon and Cardamom

**Beverages:** Tea & Coffee

**Rubber:** Hevea sp.

10 hrs.

#### Medicinal botany:

**Plants in primary health care:** common medicinal plants- *Tinospora cordifolia*, *Tulsi* (*Ocimum sanctum*), *Kalabanda* (*Aloe-vera*), *Turmeric* (*Curcuma longa*), *Ashwagandha* (*Withania somnifera*) and *Sarpagandha* (*Rauwolfia serpentina*)

4 hrs



## Practicals:-

1. Morphology of Root , Stem and their modifications.
2. Morphology of Leaf and its modifications.
3. Study of Inflorescence and its types.
4. Study of Flower- Descriptive terms, Thalamus, Calyx, Corolla and Aestivation.
5. Study of Flower - Androecium and Gynoecium.
6. Study of Fruit types.
7. Study of any 20 families representing from polypetalae, gamopetalae, apetalae and monocots available in the locality.
8. Economic botany
9. Study of Medicinal Plants available in the locality.
10. Study Tour for minimum Two days to study the Flora (Taxonomy).

## Suggested readings:

1. Davis, P.H and Heywood, V.H. 1963, principles of angiosperm taxonomy, Oliver and boyd, London.
2. Heywood, V.H. and moore, D.M. (EDS) 1984, current concepts in plant taxonomy academic press, London.
3. Jeffery, C. 1982, An introduction to plant taxonomy, Cambridge university press, cambridge, London.
4. Jones, S.B. Jr and luchsinger, A.E. 1986, plant systematics (2<sup>nd</sup> edition), McGraw-Hill book co, newyork.
5. Radford, A.E. 1988, fundamentals of plant systematics, Harper and Row, newyork.
6. Singh, G. 1989, plant systematics: theory and practice, Oxford and IBH, newdelhi.
7. Atace, C.A. 1989, plant taxonomy and bio systematics (2<sup>nd</sup> edition), Edward Arnold, London.
8. Dutta, S.C. 1988, systematic botany, walley eastern newdelhi.
9. Jaques, H.E. 1999, plant families - how to know them, IBS, newdelhi.
10. Lawrence, G.H.M. 1951, taxonomy of vascular plants, Macmillan, newdelhi.
11. Stewart, W.M. 1983, Paleobotany and the evolution of plants, cambridge university press, cambridge.
12. Joshi, S.G. medicinal plants, Oxford and IBH, newdelhi.
13. Kokate and Dakeale, pharmacognacy, Nerali publication, newdelhi.
14. Lad v Ayurveda- the science of self healing- motilal banarasisdas, newdelhi.
15. Lewis, W.H. and M.P.F. Elwin Lewis 1976, medical botany plants affecting man's health, A wiley interscience publication, Jhon wiley and sons, newyork.
16. College botany vol I by Gangulee, Das and Datta, New central book agency, Calcutta.
17. Systematic botany by R.N Sutaria.
18. Taxonomy of Angiosperms by B.P Pandey.
19. Kocchar, S.L. 1988, Economic Botany in Tropics, 2<sup>nd</sup> edition, Macmillan

Ltd, New Delhi.



## 11.ZOOLOGY (Optional)

B.Sc IV Semester Scheme (CBSC - Pattern)  
Zooology (Optional) Syllabus(Revised)  
2018 -19 Onwards

Semesters	Syllabus	Total Hours	Theory & Practical/Week
IV	Cell Biology, Histology & Animal Behaviors	50hrs.	4 hrs.
	PRACTICAL	12	4 hrs.

NOTE:

THEORY MARKS			PRACTICAL MARKS		
Internal	Annual	Total Marks	Internal	Annual	Total Marks
20	80	100 marks	10	40	50 marks

Question paper pattern for THEORY examination

Que.No.	Marks	Solve	Total Marks
I	02	10	20
II	04	05	20
III	10	04	40
<b>TOTAL --- 80 MARKS</b>			

PRACTICAL pattern for examination

Que.No.	Solve	Total Marks
I	Make a temporary preparation of Histology slide.	10
II	Make a temporary squash preparation of Onion root tip/Grasshopper Testis/Onion flower bud	08
III	Identification (6X2)	12
IV	Field study report & viva	05
V	Journal	05
<b>TOTAL --- 40 MARKS</b>		

B.Sc IV Semester Syllabus Revised (2018-19) Onwards  
ZOOLOGY (Optional)

Total Marks--80

Total Teaching--50hrs.

Cell Biology, Histology & Animal Behaviors





# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**WEL-COME**

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.Sc**

**V Semester**

**w.e.f.**

**Academic Year 2016-17 and onwards**



# 1. PHYSICS (OPTIONAL)

B.Sc. V Semester  
PHYSICS(Optional)  
Paper I

Physics 5.1: CLASSICAL MECHANICS, ELECTRONICS & RELATIVITY (TOTAL HOURS: 50)

## UNIT I

### CLASSICAL MECHANICS

**Constraints:** Types with example, Degrees of Freedom, Configuration Space, Principle of Virtual Work, Generalized Co-ordinates, Virtual displacement, Velocity, Force, Kinetic and Potential Energies (derivations). D'Alembert's Principle, Lagrange's equation of motion from D'Alembert's Principle, Applications of Lagrange's equation of Motion.

- Motion of a Single Particle in Cartesian Co-ordinates.
- Harmonic Oscillator.

Problems

(8+2= 10 Hrs.)

## UNIT II

Reduction of two body problem to equivalent one body problem. Expression for the total energy, equation of orbit (equivalent of single body) and Classification of Orbits. Kepler's Laws of Planetary Motion and their derivation from Lagrange's equation of motion.

**Nano Physics:** Size effect: surface volume ratio, quantization, Dangling bonds, island formation and self-assembly. Quantum computing, single electron transistor. Examples: Graphene and fullerene.

Problems

(8 + 2 = 10Hrs.)

## UNIT III

### RELATIVITY

Michelson – Morley Experiment. Postulates of Special Theory of Relativity. Lorentz Transformations equations(Derivation). Relativity of Length and Time. Law of Addition of Velocities. Variation of Mass with Velocity. Mass-Energy Relation.

Problems



( 8+2=10 Hours )

#### UNIT IV

##### ANALOG ELECTRONICS

###### **Network theorems:**

Current and voltage sources , Superposition theorem, Thevinin's and Norton's Theorem. Maximum power transfer Theorem (Derivation for all theorems).

###### **Power supply**

Unregulated bridge rectifier (efficiency, ripple factor, PIV, TUF and Voltage regulation-qualitatively.) Filters: capacitor filter, LC filter,  $\pi$ -section filter (study of wave forms qualitatively) Zener diode : characteristics parameter, Explanation of Zener Breakdown. Zener diode used as voltage regulator using unregulated DC voltage bridge rectifier.

Problems

(8 +2 = 10 Hrs.)

#### UNIT V

###### **Transistor:**

h-parameters of a transistor and their determination using CE configuration transistor as CE amplifier with frequency response .Types of feedback, transfer gain with feedback (derivation). Oscillators. Transistor as an oscillator, comparison between amplifier and oscillator, Classification of oscillators-damped and undamped oscillators, the oscillatory circuit, frequency of oscillatory current, essentials of a feedback LC oscillator. Hartely and Phase shift oscillators.

FET-Types, characteristics and parameters. FET as a common source amplifier (Qualitative).

Problems

(8+2=10 Hrs.)



**LIST OF EXPERIMENTS**

1. Thevenin's & Norton's Theorem(Ladder Network).
2. h-parameters of a transistor using DC source.
3. Power supply using bridge rectifier (internal resistance and voltage regulation)
4. Power supply using bridge rectifier with Pi- section filters (internal resistance and voltage regulation)
5. Zener diode as voltage regulator using bridge rectifier power supply.
6. Transistor as CE amplifier.
7. Phase –shift oscillator using transistor.
8. Hartley oscillator using transistor.
9. FET-static characteristics and parameters.
10. FET-as common sources amplifier.

**NOTE:**

1. Experiments are of Four hours duration.
2. Minimum of Eight experiments to be performed.

**REFERENCE BOOKS:**

1. Classical Mechanics – Goldstein.
2. Classical Mechanics – Gupta, Kumar and Sharma.
3. Classical Mechanics – Takwale and Puranik.
4. Modern Physics – Murugesan.
5. Introduction to Relativity – R. Resnick.
6. Relativistic Mechanics – Gupta, Kumar.
7. Modern Physics – Duggal and Chabra.
8. Integrated Electronics – Millman and Halkias
9. Electronics and devices and circuits – Allan Mottershed
10. Basic Electronics –B L Theraj
11. Hand book of Electronics- Gupta and Kumar
12. Principles of Electronics-V,K,Mehta
13. Handbook on Nanophysics-John D Miller





14. Nanotechnology: principles & practices-S.K.Kulkani
15. Introduction to Nanotechnology-C.F.Poole and F.J.Owens

**B.Sc. V Semester  
PHYSICS(Optional)  
Paper II**

**Physics 5.3: QUANTUM MECHANICS AND SPECTROSCOPY (Total Hours : 50 )  
UNIT I**

**QUANTUM MECHANICS:**

Compton effect-(qualitatively), Devisision and Germer Experiment, de-Broglie Hypothesis. G. P. Thomson experiment ,Uncertainty principle Statement, Illustration by Gamma –Ray Microscope.

**LASERS:**

Stimulated Absorption and Emission, Einstein A and B coefficients.

Conditions for LASER action, Gas LASERs He – Ne, Diode

LASERs, Characters and applications of laser.

Problems.

(4+5+1=10 Hrs.)

**UNIT II**

**WAVE MECHANICS:** Time independent Schrodinger's wave equation (derivation) Physical significance of wave function. Derivation of expression for energy of a particle in a box. Eigen function and Eigen values. Linear harmonic oscillator with energy expression (derivation). Concept of zero point energy and degeneracy.

Problems

(8+2 = 10Hrs.)

**UNIT III**

**ATOMIC SPECTRA**

Vector atom model- electron spin and quantization and quantum numbers. Stern Gerlach experiments. Coupling scheme for single valance and two valance systems.

Magnetic field effect on light- Magnetic moment of electron due to orbital motion.



Larmor precession. Normal Zeeman effect-explanation of experimental setup  
Quantum theory of normal Zeeman effect. Energy level diagram for sodium D  
lines. Anomalous Zeeman effect (qualitative). Lande's  $g$ -factor. Energy level  
diagram for Sodium D lines.

Problems

(8+2= 10 Hrs.)

#### UNIT IV

##### MOLECULAR SPECTRA AND LASERS

Spectra of diatomic molecules:

Nature of Molecular spectrum, Different types of energies of a molecule,  
Diatomic molecule as a Rigid Rotator: derivation of expression for Rotational  
Energy of a Diatomic molecule. Application of Molecular spectra, Energy of a  
Diatomic molecule as a non rigid rotator(Qualitative).

##### RAMAN EFFECT:

Raman Scattering. Experimental set up. Raman Spectrum, Explanation of  
Raman effect on the basis of quantum theory. Applications of Raman Effect.

Problems

( 8 + 2 =10 Hrs. )

#### UNIT V

##### MATHEMATICAL PHYSICS

**Legendre functions:** Legendre polynomials , Rodrigue's formula , generating  
functions and recursion relations , Orthogonality and normalization,  
associated Legendre functions , spherical harmonics .

**Bessel functions:** Bessel functions of the first kind, recursion relations,  
Orthogonality. Hermite fuctions ,; Hermite polynomials , generating  
functions , recursion relations , orthogonality.

Problems

(8+2 =10Hrs.)



LIST OF EXPERIMENTS

1. Planck's constant by photo cell
2. Construction of multirange voltmeter.
3. Construction of multirange ammeter
4. Photoconductive cell
5. Astable multivibrator using transistor
6. Characteristics of G.M counter.
7. Low pass filter.
8. High pass filter.
9. Ionization potential of xenon or mercury.
10. Photovoltaic cell.

**NOTE:**

1. Experiments are of Four Hours duration.
2. Minimum of Eight Experiments to be performed.

**REFERENCE BOOKS:**

1. Modern Physics – Murugesan.
2. Quantum Mechanics – Pauling and Wilson
3. Quantum Mechanics – B.N.Srivastava.
4. Modern Physics Vol I – B. Basavaraaj.
5. Engineering physics- Basavaraaj.
6. Atomic spectra – White.
7. LASERS and Non – Linear Optics – B.B.Laud.
8. Fundamentals of molecular spectra- C.NBarwell.
9. Mathematical Physics --H. K. Dass and Dr. Rama Verma
10. Mathematical Methods for Physicists (4<sup>th</sup> Edition) George Arfken and Hans J. Weber Academic Press San Diego(1995)
11. Mathematical Physics - P.K. Chatopadhyay-Wiley Eastern Limited New Delhi (1990).
12. Introduction to mathematical Physics – Charlie Harper, Prentice-Hall of India Private Limited New-Delhi (1995)
13. Mathematical Physics - M.L.Boas



## TEXT BOOKS

1. Structural Geology - By M. P. Billings,
2. Fundamentals of Structural Geology - By N. W. Gokhale
3. Principles of structural Geology - C.M. Novin
4. Structural geology - De Sitter
5. Theory of Structural Geology- Gokhale, N.W
6. Structural Geology – Fundamentals and Modern developments. – Ghosh S.K.
7. Structural and Tectonic, Principles- P.C. Beddley
8. An Introduction to structural Geology - E.W. Spencer
9. Fundamentals of structural Geology- Park, P.G
10. Economic Mineral Deposits- Bateman Allan M.
11. Mineral Deposits - Lindgren W

## 3. CHEMISTRY (OPTIONAL)

### FIFTH SEMESTER B.Sc. COURSE

Chemistry

Paper-I

Code : 14BSCCHE151

Teaching Hours : 50 Hours

#### Inorganic Chemistry:

##### Coordination Chemistry-I

07 hours

Review of terms- double salts, complex salts, central metal ion, ligand, types of ligands, complex ion and coordination number, IUPAC nomenclature

Valence bond theory of coordination compounds with reference to  $[\text{Fe}(\text{CN})_6]^{3-}$ ,  $[\text{Fe}(\text{CN})_6]^{4-}$ ,  $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$ ,  $[\text{Zn}(\text{NH}_3)_4]^{2+}$ ,  $[\text{Ni}(\text{CN})_4]^{2-}$  and its limitations.

Isomerism- ionisation, hydrate, linkage, geometrical and optical in coordination compounds with respect to coordination number 4 and 6.

##### Theory of gravimetric analysis

04 hours

Principles of gravimetric analysis- super saturation, von Weimar equation, conditions of precipitation, coprecipitation and post precipitation. Separation of



precipitate from mother liquor, washing, properties of wash liquid, drying and ignition of precipitate, weighing form.

**Inorganic polymers** **04 hours**  
Inorganic polymers, Types, comparison with organic polymers, silicones, phosphonitrilic halides- formation, structure and applications.

**Green Chemistry** **03 hours**  
The need for green chemistry and eco-efficiency, green methods, green products, recycling of wastes, 12 principles of green chemistry.

**Organic Chemistry:**

**Heterocyclic Compounds** **05 hours**  
Classification, molecular orbital picture and Aromatic character of furan, thiophene, pyrrole and pyridine, synthesis of the following compounds.  
i) Furan, thiophene and pyrrole from 1,4- diketones.  
ii) Pyridine by Hantzsch synthesis.  
Electrophilic substitution reactions of pyrrole, furan and pyridine (chlorination and nitration), comparison of basicities of pyridine, piperidine and pyrrole

**Organic Synthesis via enolates** **05 hours**  
Acidity of  $\alpha$ -hydrogens, synthesis of ethylacetoacetate (EAA) by Claisen condensation and its mechanism, synthesis of diethyl malonate, keto-enol tautomerism of EAA  
Synthesis of following compounds using EAA and diethyl malonate:  
i) ketones ii) carboxylic acids iii) heterocyclic compounds iv) dicarboxylic acids.

**Alkaloids** **06 hours**  
Definition, source, classification and general characteristics, Hofmann exhaustive methylation with pyridine as an example.  
Isolation, constitution and confirmation by synthesis - Coniine, hygrine and nicotine.

**Physical Chemistry:**

**Microwave Spectroscopy** **05 hours**  
Classification of molecules, rotational spectra of rigid diatomic molecules, criteria for showing the spectra, energy levels of rigid rotator, selection rules (final equations only), determination of bond length and moment of inertia of HCl molecule.

**Phase rule** **05 hours**  
Terminology and explanation of the terms involved. Applications of phase rule- One component system-water and sulphur systems Two-component systems- Bismuth-Cadmium system and KI - water system. Eutectic and freezing mixture.



**Vibrational spectrum****06 hours**

Simple harmonic oscillator, Hooke's law, energy level of simple harmonic oscillator model of diatomic molecule (final equations only), selection rules, zero point energy determination of force constant and qualitative relation between force constant and bond dissociation energies. Vibrational degrees of freedom of molecules (Linear and non linear).

**Reference books for inorganic chemistry**

01. Advance Inorganic Chemistry Vol-I and II	Gurudeep Raj
02. Advance Inorganic Chemistry	Satya Prakash
03. Modern Inorganic Chemistry	R.D. Madan
04. Inorganic Chemistry	James Huheey
05. Concise Inorganic Chemistry	J.D. Lee
06. Inorganic Chemistry	Shriver and Atkins

**Books recommended for organic chemistry:**

01. Organic Chemistry	I.L. Finar Vol-I
02. Organic Chemistry	Morrison and Boyd
03. Advanced Organic Chemistry	Jerry March

**Books recommended for physical chemistry:**

01. Fundamentals of Molecular Spectra	C.N. Banwell
02. Molecular Spectroscopy	S. Chandra
03. Molecular Spectroscopy	White
04. Chemical Kinetics	K.J. Laidler
05. Surface Chemistry	Grigg

**Chemistry****Paper-II****Code : 14BSCCHET52****Teaching Hours : 50 Hours****Inorganic Chemistry:****Industrial Chemistry-I****08 hours**

**Alloys**-Significance, types of alloys (ferrous and non ferrous alloys), preparation (fusion and electro-deposition) and their applications.

**Abrasives**- Classification, Mohr scale of hardness. Manufacture and application of carborundum, alundum, tungsten carbide.

**Glass** - physical and chemical properties of glass, raw materials, manufacture using tank furnace. Annealing of glass, types, composition and uses of glasses.



**Industrial Chemistry-II****09 hours**

**Cement** - Raw materials, composition of Portland cement, manufacture by rotary kiln method, mechanism of setting.

**Pigments** - Manufacture and relative merits of white lead, Lithopone, Titanium white, constituents of paints and varnishes.

**Fuels** - characteristic and calorific values of fuels; advantages of gaseous fuels; Manufacture of water gas and biogas.

**Organic Chemistry:****Reagents and Reactions****08 hours**

Preparation, mechanism of action and applications - DCC(Amide formation),  $\text{LiAlH}_4$ (reduction of aldehyde, carboxylic acid and ester), DDQ(Benzylic oxidation of tetralin, aromatisation of tetralin), Lead Tetra Acetate(oxidation of 1,2-diols), NBS(allylic bromination),  $\text{OsO}_4$ (hydroxylation of alkenes), PCC(Pyridinium chlorochromate) in the oxidation of primary alcohols.

**Mass Spectroscopy****03 hours**

Principle, instrumentation, definitions of parent peak and base peak, McLafferty rearrangement with respect to butyraldehyde.

**Dyes****05 hours**

Classification, requirement of a dye, colour and constitution.

The synthesis of each of the following class of dyes-

Azo dyes-Congo red, Vat dyes-Indigo, Anthraquinone dyes-Alizarin

Triphenylmethane dyes-Malachite green, Crystal violet

Phthalein dyes-Fluorescein, Eosin; Synthesis of each dyes

**Physical Chemistry:****Surface Chemistry****08 hours**

Adsorption, derivation of Freundlich and Langmuir's adsorption isotherms, forms of Langmuir's adsorption isotherms at high and low pressure regions, BET equation (No derivation), determination of surface area using BET equation.

Catalysis-Theories of catalysis-intermediate and adsorption theory, enzyme catalysis-Michaelis-Menten equation, industrial applications of catalysis.

**Chemical equilibrium****05 hours**

Thermodynamic treatment of law of mass action, van't Hoff reaction isotherm, relationship between  $K_p$ ,  $K_c$  and  $K_x$ , variation of  $K_p$  and  $K_c$  with temperature and pressure.



**Kinetics of chain reactions****04 hours**

Examples of chain reactions, general aspects of chain reactions, chain length, chain transfer reactions, chain inhibition, kinetics of branching chain reactions.

**Reference books for inorganic chemistry:**

01. Industrial chemistry B.K. Sharma
02. Engineering Chemistry Jain and Jain

**Books recommended for organic chemistry:**

01. Reaction Mechanism P.S. Kalsi
02. Mass Spectroscopy Y.R. Sharma
03. Synthetic Organic Chemistry Gurdeep Chatwal
04. Organic Chemistry P.L. Soni
05. Organic syntheses Jagadamba Singh and Yadav

**Books recommended for physical chemistry:**

01. Electrochemistry Glasstone
02. Physical Chemistry Atkins
03. Engineering Chemistry Jain

## CHEMISTRY PRACTICALS

**FIFTH SEMESTER B.Sc. COURSE**

Chemistry Practical

Paper-I

Code : 14BSCCHEP51

Total number of hours per week: 04

Internal Assessment=10 Marks

Total No. of hours per Semester: 52

Practicals: 40 Marks

**A. Organic Preparations**

01. Preparation of *m*-dinitrobenzene from nitrobenzene.
02. Preparation of phthalimide from phthalic anhydride and urea
03. Preparation of *p*-bromoacetanilide from acetanilide.
04. Preparation of *p*-bromoaniline from *p*-bromoacetanilide.
05. Preparation of *p*-nitroacetanilide from acetanilide
06. Preparation of *p*-nitroaniline from *p*-nitroacetanilide.
07. Preparation of benzoic acid from benzaldehyde
08. Preparation of methyl orange.





**B. Instrumental Analysis:**

01. Estimation of  $\text{Fe}^{2+}$  spectrophotometrically through phenanthroline complex.
02. Determination of pH of biological fluids like milk, orange juice, citric acid solution and sodium carbonate solution.

**Note:** In case of Part A, not more than three students should be given the same preparation at the time of examination.

## CHEMISTRY PRACTICALS

### FIFTH SEMESTER B.Sc. COURSE

Chemistry Practical

Paper-II

Code : 14BSCCHEP52

Total number of hours per week: 04

Internal Assessment=10 Marks

Total No. of hours per Semester: 52

Practicals: 40 Marks

**A. Inorganic volumetric experiments:**

01. Preparation of aqueous iron solutions and estimation of iron using standard  $\text{K}_2\text{Cr}_2\text{O}_7$  (Internal indicator method).
02. Preparation of aqueous solution of copper and zinc from brass and estimation of percentage of copper using standard sodium thiosulphate solution.
03. Preparation of calcium solution from lime stone and estimation of percentage of calcium using oxalate method.
04. Estimation of zinc using standard solution of potassium ferro cyanide (Standardization of the titrant to be done using standard zinc sulphate solution).

**B. Physical Chemistry experiments :**

01. Determination of the concentration of HCl by conductometric titration using the standard NaOH.
02. Determination of the concentration of  $\text{CH}_3\text{COOH}$  by conductometric titration using the standard NaOH.
03. Determination of equivalent conductance of strong electrolyte (NaCl) at infinite dilution.
04. Determination of dissociation constant of (weak acid) acetic acid conductometrically.
05. Determination of percentage composition of unknown mixture of A & B liquids using Abbe's refractometer by formula method.



06. Determination of percentage composition of unknown mixture of A & B liquids using Abbe's refractometer by graphical method.
07. Conductometric precipitation titration of NaCl vs AgNO<sub>3</sub>.
08. Determination of specific rotation of glucose solution by polarimeter.
09. Determination of solubility of sparingly soluble salt (BaSO<sub>4</sub>) conductometrically.

**NOTE:** For Examination, following combinations have to be given.

- Combination-1: Organic Preparation of Practical-Va + Physical of Practical-Vb.
- Combination-2: Instrumental analysis of Practical-Va + Inorganic volumetric of Practical-Vb.

#### 4. ELECTRONICS (OPTIONAL)

##### B. Sc. SEMESTER – V

##### Electronics (optional) Paper - I

Total Teaching hours: 50. Teaching hours per week: 4 hours

#### ELE- 5.1: COMMUNICATION, OPTICAL FIBER COMMUNICATION & TRANSDUCERS.

##### UNIT –I: COMMUNICATION

Electromagnetic radiation, different layers of Ionosphere and wave propagation through them. Skip-distance, Maximum usable frequency. Virtual height, Critical frequency, Critical angle, Secant law and fading.

**Modulation:** Need for modulation. Types of modulation. Theory of amplitude modulation, modulation index side bands, power relations, linear modulation Square law modulation.

**FM modulation:** Expressions for FM wave, modulation index, Deviation ratio, FM side bands.

**Phase modulation:** Expressions for phase modulation

8Hrs. + 2Hrs. Problems = 10hrs



## 7. MATHEMATICS (OPTIONAL)

### SYLLABUS FOR B.Sc. MATHEMATICS (OPTIONAL)

#### FIFTH SEMESTER (2016-17 onwards)

#### Paper I

#### 5.1 REAL ANALYSIS

TEACHING HOURS: 50 HRS

(TEACHING: 5 HRS PER WEEK)

##### Unit I.

**Riemann Integration**:- Partition of an interval. The upper and lower Riemann sums & Riemann integrals. Necessary and sufficient conditions for integrability. Algebra of integrable functions (constant, sum, difference, product, quotient, and modulus).

(10 hrs)

##### Unit II.

**Riemann Integration-(contd.)** Integrability of continuous functions, monotonic functions. Fundamental theorem of integral calculus. Change of variables. Integration by parts. The first and second mean value theorem (Bonnet & Weirstrass form) of integral calculus.

(10 hrs)

##### Unit III.

**Improper integrals**: Improper integrals of first and second kind. Comparison tests. Abel's test and Dirichlet's test.

(10 hrs)

##### Unit IV.

**Beta and Gamma functions**: Properties, Relation between Beta & Gamma functions and their convergence and Duplication formula.

(10 hrs)

##### Unit V.

**Multiple Integrals**: Differentiation under integral sign. Double and triple integrals, areas and volumes (Cartesian coordinates).

(10 hrs)

#### REFERENCES:

- 1) Fundamental Real analysis - S. L. Gupta & Nisha Rani
- 2) Mathematical Analysis—Shaminarayan and P. K. Mittal
- 3) A Course of Mathematical Analysis—M. D. Raisinghania
- 4) Real Analysis- N.P. Bali
- 5) A text book of B.Sc. Mathematics- G. K. Ranganath



## PAPER II

### 5.2 NUMERICAL ANALYSIS

TEACHING HOURS: 50 HRS

TEACHING: 5 HRS PER WEEK

#### Unit I.

**Solutions of Algebraic and transcendental equations:** Bisection method, Iteration method, Newton-Raphson method.

**Numerical Solutions of non-homogeneous systems :** Gauss Seidel method, Jacobi Iteration Method.

(10 hrs)

#### Unit II.

**Finite Differences:** Operators  $\Delta$  (Delta),  $\nabla$  (Del) &  $E$  (Shift). Definitions and their properties,  $n^{\text{th}}$  order difference of a polynomial.

**Interpolation:** Newton Gregory forward and backward difference interpolation formula and examples. Lagrange's interpolation formula and examples. (10 hrs)

#### Unit III.

**Numerical differentiation:** Forward and backward difference formulae. Computation of first and second ordered derivatives.

**Numerical integration :** General Quadrature formula, Trapezoidal rule, Simpsons rules ( $1/3^{\text{rd}}$  and  $3/8^{\text{th}}$ ).

(10hrs)

#### Unit IV.

**Solution of initial value problems:** by ordinary linear first order differential equations by Taylor's series, Euler's, Picard and Runge-Kutta method of order two.

(10hrs)

#### Unit V.

**Difference equations:** Basic definitions, order and degree, solution, formation of first and second linear difference equations with constant coefficients (simple examples).

(10hrs)

#### REFERENCES:

- 1) Introductory method of numerical analysis- S.S.Shastri
- 2) Calculus of finite differences – H.C.Saxena
- 3) Numerical methods for scientific and engineering computation- M.K.Jain, S.R.K.Iyengar, & R.K.Jain (New Age International Publications)
- 4) Text Book of Mathematics-G.K.Ranganath
- 5) Numerical Analysis by G. Balaguruswamy



PAPER III

5.3 DYNAMICS AND CALCULUS OF VARIATIONS

TEACHING HOURS: 50 HRS

TEACHING: 5 HRS PER WEEK

Unit I.

**1. Kinematics:** Velocity and acceleration of a particle along a plane curve, Radial and Transverse components of velocity and acceleration, Tangential and normal components of velocity and acceleration. (10 hrs)

Unit II.

**Central Orbits:** Motion of a particle under a central force. Use of Polar and Pedal co-ordinates. Apse, Apsidal distance and Apsidal angle. (10 hrs)

Unit III.

**Motion of a projectile:** in a non resting medium under gravity.  
**Elastic Impact:** Direct and Oblique impact of elastic bodies. (10 hrs)

Unit IV.

**Calculus Of Variations:** Variation of a function  $F = f(x,y,z)$  and functional. Variational problems. Fundamental theorem of calculus of variation, Euler's equation. (10 hrs)

Unit V.

**Calculus Of Variations-(contd.):** Geodesic on plane, on sphere, Brachistochrone problem, minimum surface of revolution, Isoperimetric problems. (10 hrs)

REFERENCES:

- 1) Dynamics – M.Ray
- 2) Text book of Mathematics – G.K.Ranganath
- 3) Dynamics – P.N.Chatterji
- 4) Advanced ordinary and partial differential equations by M.D.Raistinghanis
- 5) Higher Engineering Mathematics by B. S.Grewal



## 8. BOTANY (OPTIONAL)

### B.Sc BOTANY (Optional Subjects) Semester System

Semester	Title of the paper	Number of hours/week/paper	Duration of Examination	Internal Assessment Marks - 20/10				Semester end Examination Marks
				I Test	II Test	SEM/P RL/A 2000	ATTE NSA NCE	
I	PLANT ANATOMY & EMBRYOLOGY	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
II	PLANT PHYSIOLOGY / BIOCHEMISTRY AND PHARMACOGNOSY	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
III	ALGAE FUNGI BRYO PHYTES, PTERIDOPHYTES, GYMNOSPERMS	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
IV	DIVERSITY OF ANGIOSPERMS AND THEIR SYSTEMATIC	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
V Paper-I	PLANT BREEDING, TISSUE CULTURE, HARVEST TECHNOLOGY AND WEED MANAGEMENT	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
V Paper-II	ECOLOGY, ENVIRONMENTAL BIOLOGY AND PHYTOGEOGRAPHY	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
VI Paper-I	CELL BIOLOGY, GENETICS AND EVOLUTION	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40
VI Paper-II	MOLECULAR BIOLOGY, BIOTECHNOLOGY AND IMMUNOLOGY	04 HOURS	03 HOURS	04	10	03	03	80
	LAB	04 HOURS	04 HOURS	10				40

Individual passing is required in theory and practical.



**11. ZOOLOGY (OPTIONAL)**

**BSc-Zoology (Optional) Fifth Semester**

**Paper 5.1 and 5.2 Outline**

**STRUCTURE**

Semester	Syllabus	Hour's
V Paper I	Ecology, Evolution, Paleontology, Zoogeography & Wild life Conservation	50
V Paper -II	Genetics, Biotechnology & Biostatistics	50





# **RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**WEL-COME**

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE  
PROGRAMMES – B.Sc**

**VI Semester**

**w.e.f.**

**Academic Year 2016-17 and onwards**





## 1. PHYSICS

B. Sc. VI Semester  
PHYSICS (OPTIONAL)  
Paper I

Physics 6.1: Solid state physics, Nuclear Physics, Energy Sources, Digital Electronics and Special materials (Total Hours: 50)

### UNIT I

#### SOLID STATE PHYSICS

Crystal structure : Lattice, Lattice translational vectors, Basis of crystal structure, Types of unit cells, Coordination numbers, Bravais lattices, Seven crystal system, Miller indices, Expression for inter planner spacing, Crystal structure of NaCl and KCl.

Crystal diffraction : X-Ray diffraction, Bragg's law, Bragg's X-ray spectrometer-powder crystal method.

Specific heats of solids: Classical theory, Einstein's and Debye's theory of specific heats.  
(10 Hrs.)

### UNIT II

Free electron Theory: Classical free electron model, expression for electrical and thermal conductivity, Weidman-Franz law, Failure of classical free electron theory.

Semiconductors: Expression for electrical conductivity in case of intrinsic semiconductors, experimental determination of energy gap, Hall Effect, expression for Hall coefficient and applications.

Super Conductivity: Introduction, Occurrence of super conductivity, and destruction of super conductivity by magnetic field, Meissner effect, Isotope effect and applications.

Problems

(9 + 1 = 10 Hrs.)



### UNIT III

#### NUCLEAR PHYSICS

Alpha –rays: Theory of a decay, Range, Ionization, specific ionization and Geiger-Nuttal relation.

Beta – decay: Continuous beta spectrum, and Neutrino Hypothesis.

Nuclear Models: Liquid drop model- Explanation of semi empirical mass formula, Explanation of nuclear fission on the basis of liquid drop model, Shell model (qualitative) and Magic numbers.

Nuclear Instruments: GM counter, Scintillation counter, Linear accelerator and Cyclotron.

Problems

(12+1=13 Hrs.)

### UNIT IV

#### ENERGY SOURCES

Introduction, Conventional and nonconventional energy sources.

Advantages of Solar energy, Solar radiation at Earth's surface, Solar radiation geometry- altitude angle, Zenith angle, solar azimuthal angle, surface azimuthal angle Solar radiation measurement, Angstrom compensation Pyrheliometer, and Pyronometer.

(10 Hrs.)

### UNIT V

#### DIGITAL ELECTRONICS

Number System-Decimal, Binary, Hexadecimal and their Inter conversion Boolean algebra, Truth tables, De Morgan's theorems. Designing of logic gates using NAND and NOR Gates.

#### SPECIAL MATERIALS

Introduction, Classification of liquid crystals, Display system, Introduction to conducting polymers and applications.

Problems

(6+1=07 Hrs.)



## Physics Lab 6.2: Lab VII

### List of experiments

1. Thermistor Energy gap
2. Analysis of X-ray diffraction spectra
3. Hall Effect
4. Attenuation of  $\beta$ -ray using G.M. counter.
5. G.M.Tube (Dead time) / Inverse square law
6. Thevenin's & Norton's theorem using Whetstone's Network
7. Study of DTL gates
8. Use of IC 7400 Basics gates.
9. De.Morgan Theorems.
10. Solar Cell characteristics: a) Open Circuit voltage b) short Circuit Current.

### Note:

1. Experiments are of our hours duration
2. Minimum of eight experiments to be performed.

### Books for Reference:

1. Solid state physics: C.Kittel
2. Solid State Physics: A.J Dekkar
3. Solid state physics: Kumar & Gupta
4. Solid state Physics: Sexena Gupta Sexena
5. Nuclear Physics: I Kaplan
6. Modern Physics: Mirugeshan
7. Modern Physics: J.B.Rajam
8. Energy Sources: G.D.Rai
9. Digital Electronics: Malvino & Leach
10. Digital Electronics: B.L.Thereja
11. Computer graphics: Baker & Horn
12. Integrated Circuits: Botkar



**B. Sc. VI Semester  
PHYSICS (OPTIONAL)**

**Paper II**

**Physics 6.3: INTEGRAL TRANSFORMS, OPTOELECTRONICS, COMMUNICATION,  
PROGRAMMING and INTEGRATED ELECTRONICS (Total Hours: 50)**

**UNIT - I**

**INTEGRAL TRANSFORMS**

Fourier transform: Definition, Fourier integral, inverse transform, Fourier transform of derivatives, convolution (Mathematical Statement only), Parseval's theorem (Statement only), Applications.

Laplace transform: Definition, transform of elementary functions, inverse transforms, transform of derivations, differentiation and integration of transforms, solutions of differential equations. Difference between Laplace and Fourier transform

Problems

(8+2=10 Hrs.)

**UNIT - II  
OPTOELECTRONICS**

Introduction, Light Emitting Diodes, Photo Diodes, Laser Diodes (Pin, Avalanche diodes), Opto-coupler.

Optical fiber: Introduction, Types of Optical fibers (Single mode, Multi mode), Grading, Numerical aperture (derivation), Coherent bundle, Transmission loss, Attenuation and Distortion, Fiber Optical communication system (Block diagram with each block explanation).

Problems

(8+2=10 Hrs.)

**UNIT - III  
COMMUNICATION**

Classification of radio waves, Types of waves, propagation of radio waves through ionosphere (Qualitative), Critical frequency, Critical angle, Virtual height, Secant law.



Modulation and Demodulation: Need for Modulation, Types of modulation, AM modulation, Block diagram of AM Transmitter, Significance of modulation factor, Frequency spectrum of AM and FM., Comparison of FM with AM, Demodulation: Necessity, AM detection, Square law detector, Block diagram of Super heterodyne receiver.

Problem

(8+2=10 Hrs.)

#### UNIT – IV COMPUTER PROGRAMMING

Computer programming Preliminaries, Algorithms, flowcharts and their symbols, simple flow chart examples.

##### Study of C-language:

Basic structure of C-Programming , tokens, keywords and identifiers , constants, variables, data types, , decision control statement ,operators and expressions , loop control statements ,decision making:IF-ELSE statement for looping, case control statements.

Problems

(7+ 3 =10 Hrs.)

#### UNIT V ELECTRONICS

Non – Sinusoidal Oscillators – Multivibrators – types of multivibrators, Uses of multivibrators. Explanation of astable, monostable and bistable multivibrators

Integrated Circuits – Timer IC – 555 & 7400 – block diagram and explanation of pin configuration. Uses of timer IC in different cases, Generation of rectangular and square wave using time IC.

Op-Amp – Op-Amp symbol and polarity convention. Ideal op – Amp, Op-Amp as a inverter and non inverter, virtual ground and summing point. Op-Amp applications as phase shift and Wien bridge oscillator

Problems

(8+2 = 10hrs)



## PHYSICS 6.4: LAB – VIII

### List of Experiments

1. Astable multivibrator using IC – 555 timer (determination of frequency and duty cycle)
2. Phase-shift oscillator using Op-Amp (IC-741) (determination of frequency and phase shift)
3. Wien bridge oscillator using Op-Amp (IC-741) (determination of frequency)
4. Optical fiber – Bending loss and splice loss estimation
5. Study of voltage doubler and tripler using CRO (representation of waveforms)
6. Design, develop and execute a program in C to find and output all the roots of given quadratic equation, for non-zero coefficients.
7. Design, develop and execute a program in C to reverse a given four digit integer number and check whether it is a palindrome or not. Output the given number with suitable message.
8. I-V Characteristics of a thermistor at different temperatures
9. Applications of IC – 7400 (Any three Boolean expressions)
10. Study of divergence of laser beam

#### Note:

1. Experiments are of Four hours duration
2. Minimum of eight experiments to be performed.



### 3. CHEMISTRY (OPTIONAL)

#### SIXTH SEMESTER B.Sc. COURSE

Chemistry

Paper-I

Code : 14BSCCHET61

Teaching Hours : 50 Hours

#### **Inorganic Chemistry:**

##### **UNIT-I**

##### **Coordination compounds -II**

09 hours

Crystal field theory (CFT) with reference to octahedral, distorted octahedral (Jahn-Teller distortion), tetrahedral and square planar complexes; calculation of crystal field stabilization energy, factors affecting  $10Dq$ ; consequences of crystal field splitting on ionic radii of  $M^{2+}$  ions, enthalpy of hydration of  $M^{2+}$  ions, explanation of colour and magnetic properties of magnetic complexes, limitations of crystal field theory, calculation of magnetic moment using Gouy's method.

##### **UNIT-II**

##### **Metal-ligand Equilibria:**

05 hours

Stability constant, stepwise and overall formation constants, trends in step wise constants, factors affecting the stability of the metal complexes with reference to the nature of metal ion and ligand.

**Chelates** - definition, characteristics, factors influencing the stability of metal chelates and importance of chelates.

##### **UNIT-III**

##### **Organometallic Chemistry**

03 hours

Introduction, classification of organotransition metal complexes, 18 electron rule with respect to  $[Fe(CO)_5]$ ,  $[Ni(CO)_4]$ ,  $[Mn(CO)_5]^+$ , ferrocene, structure and bonding in metal olefins (Zeise's Salt).

#### **Organic Chemistry:**

##### **UNIT-I**

##### **Carbohydrates**

05 hours

Haworth and conformational formulae of glucose and fructose, mutarotation and its mechanism, osazone formation, Killani's synthesis, Ruff's degradation, epimers and epimerisation with respect to monosaccharides, interconversions of glucose and fructose.



## UNIT-II

### Vitamins and Hormones

03 hours

Vitamins: Classification and importance of vitamin-A, B<sub>6</sub>, B<sub>12</sub>, C, D and E. Synthesis of Vitamin-C from D(+)-glucose, synthesis of vitamin-A by Vandrop et al.

## UNIT-III

### Amino acids, Peptides and Proteins

06 hours

Classification, structure and stereochemistry(D and L) of amino acids, acid-base behaviour, iso-electric point and electrophoresis, p.eptides-nomenclature and structure of peptides, synthesis of a dipeptide(Bergmann synthesis). Classification of proteins, levels of protein structure(primary, secondary and tertiary structure), protein denaturation and renaturation.

## UNIT-IV

### Terpenoids

03 hours

Introduction, classification of terpenes, Ingold's isoprene rule, constitution of citral with synthesis, synthesis of  $\alpha$  and  $\beta$  ionones, synthesis of  $\alpha$ -terpeniol.

## Physical Chemistry:

### UNIT-I

#### Electronic Spectrum

05 hours

Concept potential energy curves for bonding and antibonding molecular orbitals, qualitative description of selection rules, energy levels and respective transitions, Frank-Condon principle.

### UNIT-II

#### Physical properties and molecular structure

04 hours

Introduction-dipole moment, induced dipole moment, measurement of dipole moment by temperature variation method and its applications.

### UNIT-III

#### Polymers

03 hours

Introduction, classification, determination of molar masses of macromolecules by viscometry and Donnan membrane equilibrium.

### UNIT-IV

#### Quantum Chemistry

04 Hours

Photoelectric effect - Einstein's photoelectric equation, wave particle duality, de-Broglie hypothesis, de-Broglie equation(derivation), experimental verification-Davissan-Germer experiment

## Reference books for inorganic chemistry

- |                                              |                    |
|----------------------------------------------|--------------------|
| 01. Advance Inorganic Chemistry Vol-I and II | Gurudeep Raj       |
| 02. Advance Inorganic Chemistry              | Sitya Prakash      |
| 03. Modern Inorganic Chemistry               | R.D. Madan         |
| 04. Inorganic Chemistry                      | James Huheey       |
| 05. Concise Inorganic Chemistry              | J.D. Lee           |
| 06. Inorganic Chemistry                      | Shriver and Atkins |





**Books recommended for organic chemistry:**

01. Organic Chemistry P.L. Soni
02. Organic Chemistry I.L. Finar Vol-II
03. Biochemistry Voet and Voet

**Books recommended for physical chemistry:**

01. Molecular Spectroscopy C.N. Banwell
02. Physical Chemistry Atkins
03. Physical Chemistry Puri and Sharma, New edition

**SIXTH SEMESTER B.Sc. COURSE**

Chemistry

Paper-II

Code : 14BSCCHET62

Teaching Hours : 50 Hours

**Inorganic Chemistry:**

**UNIT-I**

**Chromatography**

**07 hours**

Principle, types, stationary and mobile phases, physical factors of separation, brief account of paper chromatography, calculation of  $R_f$  value, brief account of column chromatography and its applications.

**Flame photometry:** Principle, Limitations, Instrumentation, Flame photometric determination of Na and K.

**Thermogravimetry:** Principle and applications of thermogravimetric methods (TG and DTA).

**Electrogravimetry:** Principle, Instrumentation, Electrogravimetric determination of Copper.

**UNIT-II**

**Soil Analysis**

**03 hours**

Macro nutrients, trace metals and organic matter in soil. Determination of pH. Determination of nitrogen by alkaline permanganate method and phosphorus by Bray's and Olsen's method present in the soil.

**UNIT-III**

**Electronic spectra of transition metal complexes**

**07 hours**

Russel-Sandar's coupling in defining ground states of spectrochemical series, derivation of spectroscopic ground terms (d1 to d10 without J values), types of electronic transitions (d-d transitions, charge transfer transitions-MCT and LMCT), selection rule for d-d transitions, Orgel energy level diagram-d1 and d2 states, discussion of the electronic spectrum of  $[\text{Ti}(\text{H}_2\text{O})_6]^{3+}$  complex ion.



## Organic Chemistry:

### UNIT-I

#### Chemotherapy

05 hours

Introduction, requirement of an ideal synthetic drug, classification, synthesis and uses of the following-

Antipyretics-antipyrine, paracetamol

Anaesthetics-novacaine(local) and pentothal sodium(general)

Antihistamines-chlorpheniramine maleate(CPM)

Antimalarials-paludrine, chloroquine

Antibiotics-chloromycetin, penicillin, tetracyclin

Para pharmaceutical reagents-Benedict's reagent, sodium citrate, Barfoed reagent.

### UNIT-II

#### Soaps and Detergents

03 hours

Soaps - Introduction, manufacture by modern process, cleaning action of soap.

Detergents - anionic, cationic, nonionic, with suitable examples, distinction between soaps and detergents, emulsifiers, stabilisers and builders.

### UNIT-III

#### Reaction Mechanism

04 hours

a) Beckmann rearrangement

b) Favorskii rearrangement

c) Benzidine rearrangement

d) Benzilic acid rearrangement

### UNIT-IV

#### NMR Spectroscopy

05 hours

Principle of Proton Magnetic Resonance(<sup>1</sup>H NMR) spectroscopy, nmr spectrum, chemical shift, nuclear shielding and deshielding, spin-spin coupling(n+1) rule, intensity(height) of the signal, TMS as internal standard-advantages, interpretation of PMR spectra of simple organic molecules such as ethyl bromide, n-propyl bromide, iso propyl bromide, ethanol, acetaldehyde and benzene.

## Physical Chemistry:

### UNIT-I

#### Electro motive force

11 hours

Reversible and irreversible cells, EMF of a chemical cell and its measurement by potentiometer, standard cell (Weston standard cell).

Types of electrodes - Reference electrode, calomel electrode, derivation of Nernst equation for emf of a cell, concentration cells- with and without transference, liquid junction potential and its derivation, salt bridge.

Applications of emf measurements-

1) Determination of pH: Using hydrogen electrode, quinhydrone electrode and glass electrode.

2) Potentiometric titrations: Acid-base and redox titration.



## UNIT-II

### Photochemistry

05 Hours

Photochemical reactions, laws of photochemistry - Beer's law, Lambert's Law, Beer-Lambert's Law, Grothus-Draper Law and Einstein's Law of photochemical equivalence, quantum efficiency or yield, reasons for high and low quantum efficiencies with examples, fluorescence, phosphorescence, photosensitization and chemiluminescence.

### Reference books for inorganic chemistry

- |                                               |                        |
|-----------------------------------------------|------------------------|
| 01. Instrumental methods of chemical analysis | Wilard martin and Dean |
| 02. Instrumental methods of chemical analysis | H. Kour.               |
| 03. Quantitative Inorganic analysis           | A.I. Vogel             |

### Books recommended for organic chemistry:

- |                                 |                 |
|---------------------------------|-----------------|
| 01. Organic Spectroscopy        | Y. R. Sharma    |
| 02. Organic Spectroscopy        | P.S. Kalsi      |
| 03. Synthetic Organic Chemistry | Gurdeep Chatwal |

### Books recommended for physical chemistry:

- |                        |                 |
|------------------------|-----------------|
| 01. Quantum Chemistry  | Lewin           |
| 02. Physical Chemistry | Atkins          |
| 03. Physical Chemistry | Puri and Sharma |

## CHEMISTRY PRACTICALS

### SIXTH SEMESTER B.Sc. COURSE

Chemistry Practical

Paper-I

Code : 14BSCCHEP61

Total number of hours per week: 04

Internal Assessment=10 Marks

Total No. of hours per Semester: 52

Practicals: 40 Marks

### A. Organic estimation

01. Estimation of phenol.

02. Estimation of aniline.

03. Estimation of acetamide.



04. Determination and saponification value of groundnut/coconut oil.
05. Determination of Iodine value of groundnut/coconut oil.
06. Estimation of glucose by Benedict's reagent.

**B. Physical Chemistry Experiments**

01. Determination of concentration of given acids mixture (HCl+CH<sub>3</sub>COOH) conductometrically using standard NaOH.
02. Verification of Beer-Lambert's Law by colorimetric method and calculation of molar extension coefficient of FeCl<sub>3</sub>.
03. Verification of Beer-Lambert's Law by colorimetric method and calculation of molar extension coefficient of copper sulphate.
04. Determination of concentration of strong acid HCl by potentiometric titration against strong solution of NaOH.
05. Potentiometric titration of FeSO<sub>4</sub> against K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>.
06. Determination of the solubility and solubility product of sparingly soluble salts (Silver halides) by potentiometrically.
07. Determination of heat of neutralization of strong acid by strong base by water equivalent calorimetric method.
08. Determination of dissociation constant of weak acid (acetic acid) Potentiometrically.

**Note: For examination:**

50% students will perform organic estimation and 50% students will perform Physical.

## CHEMISTRY PRACTICALS

SIXTH SEMESTER B.Sc. COURSE

Chemistry Practical

Paper-II

Code : 14BSCCHEP62

Total number of hours per week: 04

Internal Assessment=10 Marks

Total No. of hours per Semester: 52

Practicals: 40 Marks

- A. Gravimetric experiments: Internal assessment-10 Marks and Experiment-30 Marks**



01. Estimation of barium as Barium sulphate.
02. Estimation of aluminium as aluminium oxide.
03. Estimation of iron as ferric oxide.
04. Estimation of lead as lead sulphate.

**B. Dissertation/Tour report: 10 marks.**

The Dissertation/Tour report should be submitted at the time of **Chemistry Practical-VIb**.

Student shall be assigned either dissertation or Tour report. The topics for dissertation shall be selected either from the V and VI semester theory syllabi or general topics related to chemistry. For Tour report, student shall visit an Industry or Academic/Research institutions like BARC, IISc etc.

**Note: For examination:**

Gravimetric experiments and Dissertation/Tour report are Compulsory.

#### **4. ELECTRONICS (OPTIONAL)**

B. Sc. SEMESTER – VI

Electronics (Optional) PAPER – I

Total Teaching hours: 50, Teaching hours per week: 4 hours

ELE- 6.1: DIGITAL COMMUNICATION, SATELLITE COMMUNICATION & TELEVISION

#### **UNIT - I: PULSE AND DIGITAL COMMUNICATION:**

Introduction – sampling theorem, types- PAM, PWM, PPM, PCM – quantization. Digital communication systems – introduction, Digital modulations (FSK, PSK, and ASK). Advantage and disadvantages of digital transmission, Applications. Characteristics of data transmission circuits – Shannon limit for information capacity, Bandwidth requirements, Data transmission speed, Noise, Cross talk, Echo Suppressors, Distortion and Equalizer.

8Hrs.+2Hrs.Problems =10hrs



## 7. MATHEMATICS (OPTIONAL)

SYLLABUS FOR B.SC MATHEMATICS (OPTIONAL)  
SIXTH SEMESTER (2016-17 onwards)  
PAPER I  
DIFFERENTIAL EQUATIONS

TEACHING HOURS: 50 HRS

TEACHING: 5 HRS PER WEEK

### Unit I.

**Differential Equations** : Simultaneous differential equations with two and three variables, Total differential equation, Condition of Integrability and its solutions.

(10 hrs)

### Unit II.

**Series Solutions of Ordinary Differential Equations**: Basic definitions, Power series, ordinary and singular points, Power series solutions of ODEs, Frobenius method.

(10hrs)

### Unit III.

**Legendre equation and functions**: Solutions of Legendre's equations in series, Legendre's functions- first and second kind, Rodrigue's formula, Orthogonal properties, Legendre's polynomial, recurrence formulae

(10hrs)

### Unit IV.

**Partial differential equations of 1<sup>st</sup> order**: formation of partial differential equation by eliminating arbitrary constants and functions, Lagrange's linear partial differential equation  $Pp+Qq = R$  and its solution. Non-linear differential equations of standard forms I,II,III and IV

(10 hrs)

### Unit V.

- a) Non-linear partial differential equations: Charpit's method  
b) Linear partial differential equations with constant coefficients (10 hrs)

### REFERENCES:

- 1) Differential equations – D.A.Murray
- 2) Differential equations – Bhudev Sharma
- 3) Differential equations – J.N.Sharma and R.K.Gupta (Krishna Prakashan Mandir Meerut)
- 4) Text book of Mathematics – G.K.Ranganath
- 5) Higher Engineering Mathematics by B. S.Grewal



PAPER II

COMPLEX ANALYSIS AND RING THEORY

TEACHING HOURS: 50 HRS

(TEACHING: 5 HRS PER WEEK)

Unit I.

**Complex Analysis** : Analytic function, Cauchy-Riemann equations, Harmonic function, Harmonic conjugate, Construction of analytic function using Milne-Thomson's method. (10 hrs)

Unit II.

**Complex Integration** : Cauchy's Theorem, Morera's Theorem, Cauchy's Integral formula, Cauchy's Integral formula for derivatives, Cauchy's inequality, Liouville's Theorem. (10 hrs)

Unit III.

Taylor's and Laurent's series, zeros and singularities of analytic functions, Calculus of Residues (10 hrs)

Unit IV.

Residue Theorem, Jordan's lemma and Contour Integration. (10 hrs)

Unit V.

**Rings and Integral domains**: Rings, Properties of rings, sub rings, ideals, principle and maximal ideals in a commutative ring, quotient rings, homomorphism and isomorphism, and integral domains (10 hrs)

REFERENCES :

- 1) Theory of functions of a Complex variables- Shanti Narayan and Mittal.
- 2) Complex Variables – B.S Tyagi
- 3) Complex Variables – J.N Sharma
- 4) Modern Algebra by A.R. Vasistha
- 5) Rings and Modules by C.S. Mishra
- 6) A Text book of B.Sc. Mathematics by Dr. S.S. Bhusanooomath and others



PAPER III

TOPOLOGY AND LAPLACE TRANSFORMS

TEACHING HOURS: 50 HRS

TEACHING: 5 HRS PER WEEK

Unit I.

**Topology**:- Open set, closed set, closure of a set; neighborhood, limit points and derived sets, interior, exterior and boundary points of a set. (10hrs)

Unit II.

**Topology-(contd..)**: Base & sub-base, subspace, separation axioms,  $T_1$  &  $T_2$  spaces (properties and examples). (10hrs)

Unit III.

**Laplace transforms**:- Definition, basic properties; Laplace transforms of some common functions. First shifting theorem, change of scale property. (10 hrs)

Unit IV.

**Laplace transforms--(contd..)**: Laplace transforms of periodic functions, Laplace transforms of derivatives and integrals, inverse Laplace transforms (10 hrs)

Unit V.

**Laplace transforms--(contd..)** Heaviside function, Dirac-delta function, unit step function, convolution theorem and Laplace transforms method of solving differential equation of first and second order with constant coefficients (10 hrs)

REFERENCES:

- 1) Modern algebra and Topology- E.Sampathkumar and K.S.Amrao
- 2) Topology - J.N.Sharma (Krishna Prakashan Meerut)
- 3) Topology by R.S.Agrawal
- 4) Laplace Transform Theory - M.G.Smith
- 5) A Text Book Of Mathematics- G.K.Ranganath





## 8. BOTANY (OPTIONAL)

B.Sc. VI Semester

(w.e.f 2016-17)

Botany paper- I

50 Hrs

**Objectives:** This paper has topics on Cell Biology, Genetics and Evolution to study the fundamental units of heredity and variations.

### Unit 1 Cell Biology:

10 Hrs.

**The cell:** General organization of prokaryotic and Eukaryotic cells. Ultra-structure & functions of Nucleus, Plastids, Mitochondria, Golgi complex, Endoplasmic reticulum, Lysosomes, Peroxisomes & Vacuoles. Ultra-structure & functions of Plasma membrane & Cell wall.

**Unit 2: Morphology of Chromosomes:** Number, size, shape, types, centromere, SAT-chromosomes, Ultra structure of giant Chromosomes, Ploidy and chromosomal aberrations.

06 Hrs.

**Unit 3: Cell division:** Mitosis and Meiosis. **Cell cycle:** regulation of cell cycle. 06 Hrs.

### Unit 4: Genetics:

22 Hrs.

Mendelism (Laws of inheritance, Monohybrid, Dihybrid Experiments), Gene interaction (Allelic - incomplete dominance, co-dominance Non - allelic - Complementary, Supplementary, Epistasis) Linkage & crossing over, Alleles, Multiple alleles, Sex determination, Sex linked inheritance, Mutations, Problems related to the above topics.



## Unit 5: Evolution :

06 Hrs

Origin of life, Lamarckism, Darwinism, Mutational and Modern concepts of evolution.

### Practicals:

1. Study of Microscopes - Light microscope, phase contrast microscope & electron microscope.
2. Cytological techniques (Pre-treatment, fixation, preservation, cytological stains, squash preparation, smear preparation, mounting media and permanent slides preparation).
3. Mitosis preparation (Squash)-onion root tips.
4. Meiosis preparation (Smear)- Onion/Rhea flower buds.
5. Micrometry.
6. Karyotype & Idiogram - *Allium cepa*.
7. Polytene chromosomes - *Drosophila/ Chironomas*.
8. Heterozygotic translocation in Rhea-discalor.
9. Genetic problems.
10. Genetic problems.

### **Suggested Reading:**

1. Gupta P.K. - A Text Book of Cell and Molecular Biology - Rastogi Publication Meerut
2. Brock Burger M. - Genetics - Mc Milan Publishing Co
3. Serot Dunn & Dobzhansky - Principles of Genetics - Tata McGraw Hill
4. Tamir - Principles of Genetics -
5. Sharma A.K. and Sharma A. - Plant Chromosomes Analysis Manipulation and Engineering - Narwan Academic Publishers Australia.



**Q. III Descriptive Answers**

21. From Unit 1: Cell Biology: *QI* sub question 1 X 10 = 10  
OR  
From Unit 2: Morphology of Chromosomes: *QI* sub question
22. From Unit 3: Cell division: *QI* sub question. 1 X 10 = 10  
OR  
From Unit 4: Genetics: *QI* sub question.
23. From Unit 4: Genetics: *QI* sub questions. 1 X 10 = 10  
OR  
From Unit 5: Evolution: *QI* sub question.

**B.Sc VI semester**

**(w.e.f 2016 -17)**

**Botany paper -II**

**(Molecular Biology, Biotechnology & Immunology)**

**50 hrs**

**Objectives:** - Molecular Biology, Biotechnology and Immunology has some recent trends in the concern fields. This will help students to pursue research in concerned fields.

**Unit 1: Nucleic Acids:** DNA & RNA occurrence, types and chemical compositions.

Experimental evidences for DNA as genetic material. Structure of DNA. Replication, semiconservative method, RNA and types, post transcription changes.

**10 Hrs.**

**Unit 2: Gene Expression:** Gene concept, Genetic code & protein synthesis. Regulation of gene expression in prokaryotes & eukaryotes.

**08Hrs.**



### Unit 3: Recombinant DNA technology and Bioinformatics:

Enzyme, vector (plasmid pBR 322), marker gene. Steps of cloning technique, PCR and its application, Genomic DNA and cDNA library. Brief concept on Genomics and proteomics

08 Hrs.

### Unit 4: Biotechnology and Genetic engineering of plants:

Basic concepts, principles and scope. Aims, strategies for development of transgenic plants

(with suitable example). Agrobacterium-The natural genetic engineer. T-DNA and transposon mediated Gene tagging, intellectual Property rights, possible ecological risks and ethical concerns.

12Hrs.

### Unit 5: Microbial genetic manipulation and Immunology

**Microbial genetic manipulation:** Bacterial transformation, selection of recombinant and transformants, genetic improvement of industrial microbes, nitrogen fixers & fermentation technology.

**Immunology:** Immuno-systems, immunotechniques in Agriculture, ELISA method to detect Plant diseases & Monoclonal antibodies.

12 Hrs.

#### Practicals:

1. DNA estimation by DPA (diphenyl amine) method.
2. RNA estimation by picol method.
3. Extraction and estimation of protein from plant source.  
1) Salt precipitation method 2) solvent method
4. Culturing of Rhizobium- YEMA media
5. Culturing of Azotobacter- ASHBY'S media
6. Demonstration of Electrophoresis technique
7. Agarose gel electrophoresis
8. Demonstration and comparison of GM Plants with Non GM Plants (BT- Cotton, BT Brinjal, BT Tomato)
9. Visit to Biotechnology Research Laboratory



**II. ZOOLOGY (OPTIONAL)**

**BSc – Zoology (Optional) Sixth Semester**

**Paper 6.1 and 6.2 Outline**

**STRUCTURE**

Semester	Syllabus	Hour's
Paper I	APPLIED ZOOLOGY. Sericulture Apiculture, Insect pest management, Vermiculture, Aquaculture, Poultry breeds, Animal Husbandry and Lac culture	50
VI Paper-II	Microbiology, Nanotechnology, Bioinformatics and Methods in Biology	50



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**GRADE-1 PRINCIPAL**

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**Course Structure and Syllabus  
for**

**Bachelor of Commerce  
2016-17 and onwards**

**RANI CHANNAMMA UNIVERSITY  
BELAGAVI**



**COURSE STRUCTURE AND SYLLABUS**

**FOR**

**B.Com**

**( I SEMESTER )**

*w.e.f. Academic Year 2015 - 16 & Onwards*



# Rani Channamma University, Belagavi

Department of Post Graduate Studies and Research in Commerce

**Proposed B.Com Course Structure of I & II Semester**

**w. e. f. Academic year 2015-16**

Paper/No.	Title of the Paper	Theory Teaching Hours	Lab. Practical	Maximum marks		
				Theory Examination	Practical Examination Marks	Total
<b>FIRST SEMESTER</b>						
1.1	English	5	3	20	80	100
1.2	Modern Indian Languages (English/Kannada/Hindi/Persian/ Marathi/Urdu/Sanskrit/Arabic)	5	3	20	80	100
1.3	Financial Accounting – I	4	3	20	80	100
1.4	Business Economics – I /Entrepreneurship Development (Vocational) I A	4	3	20	80	100
1.5	Business Environment / Business Mathematics-I/Tax procedure & Practice- (Vocational)P2A	4	3	20	80	100
1.6	Secretarial Practice	4	3	20	80	100
1.7	Indian Constitution	4	3	20	80	100
<b>Non – Commerce Students</b>						
1.8	Special Accounts – I	4	3	20	80	100
1.9	Special Commerce – I	4	3	20	80	100
<b>SECOND SEMESTER</b>						
2.1	English	5	3	20	80	100
2.2	Modern Indian Languages (English/ Kannada/Hindi/Persian/ Marathi/Urdu/Sanskrit/Arabic)	5	3	20	80	100
2.3	Financial Accounting – II	4	3	20	80	100
2.4	Business Economics – II/Entrepreneurship Development (Vocational) P 1B	4	3	20	80	100
2.5	Marketing Management / Business Mathematics-II/ Tax procedure & Practice- (Vocational)P 2B	4	3	20	80	100
2.6	Accounting Theory	4	3	20	80	100
2.7	Computer Applications in Business – I	4-2	3	20	80	100
<b>Non – Commerce Students</b>						
2.8	Special Accounts – II	4	3	20	80	100
2.9	Special Commerce – II	4	3	20	80	100





**RANI CHANNAMMA UNIVERSITY  
BELAGAVI**



**COURSE STRUCTURE AND SYLLABUS  
FOR  
B.Com  
2<sup>nd</sup> YEAR  
( III SEMESTER)**

*w.e.f. Academic Year 2016 - 17 & Onwards*



# Rani Channamma University, Belagavi

Department of Post Graduate Studies and Research in Commerce

Proposed B.Com Course Structure of III & IV Semester

w. e. f. Academic year 2016-17

Paper/No	Title of the Paper	Weekly Teaching Hours	Exam Duration	Maximum marks		
				Internal Assessment	Semester End Examination Marks	Total
<b>THIRD SEMESTER</b>						
3.1	Retailing Management	4	3	20	80	100
3.2 (A)	Principles of Entrepreneurship Development	4	3	20	80	100
3.2 (B)	Entrepreneurship Development (Vocational) P 1C	4	3	20	80	100
3.3	Corporate Accounting – I	4	3	20	80	100
3.4	Banking Law and Practice	4	3	20	80	100
3.5.	Commercial Arithmetic-I /Business Statistics – I	4	3	20	80	100
3.6(A)	Industrial Economics	4	3	20	80	100
3.6 (B)	Tax Procedures & Practice (Vocational) 2C	4	3	20	80	100
3.7	Computer Application in Business – II	4+2	3	20	80	100

Paper/No	Title of the Paper	WTHs	ED	Maximum marks		
				IA	SEE	Total
<b>FOURTH SEMESTER</b>						
4.1	Financial Management	4	3	20	80	100
4.2	Modern Business Law	4	3	20	80	100
4.3	Corporate Accounting - II	4	3	20	80	100
4.4 (A)	Business Communication	4	3	20	80	100
4.4 (B)	Entrepreneurship Development (Vocational ) 1 D	4	3	20	80	100
4.5	Commercial Arithmetic-II /Business Statistics – II	4	3	20	80	100
4.6 (A)	International Business Economics	4	3	20	80	100
4.6 (B)	Tax Procedure & Practice (Vocational) 2D	4	3	20	80	100
4.7	Computer Application in Business – III	4+2	3	20	80	100

- Note: 1. WTHs: Weekly Teaching Hours  
 2. ED: Examination Duration  
 3. IA: Internal Assessment Marks  
 4. SEE: Semester End Examination Marks



**RANI CHANNAMMA UNIVERSITY  
BELAGAVI**



**COURSE STRUCTURE AND SYLLABUS**

**FOR**

**B.Com**

**( V SEMESTER)**

*w.e.f. Academic Year 2017 - 18 & Onwards*



# Rani Channamma University, Belagavi

Department of Post Graduate Studies and Research in Commerce

## Proposed B.Com Course Structure of V & VI Semester w. e. f. Academic year 2017-18

FIFTH SEMESTER						
5.1	Management Accounting	4	3	20	80	100
5.2	Income Tax - I	4	3	20	80	100
5.3	Elements of Costing - I	4	3	20	80	100
5.4	Small Business and Economic Development	4	3	20	80	100
5.5	Computer Application - IV	4+2	3	20	80	100
Group - I Finance and Taxation						
5.6	Indian Financial Markets - I	4	3	20	80	100
5.7	Goods & Services Tax- I	4	3	20	80	100
Group - II Insurance and Banking						
5.6	Fundamentals of Life Insurance	4	3	20	80	100
5.7	Fundamentals of Banking - I	4	3	20	80	100
Group - III Marketing						
5.6	Fundamentals of Rural Marketing	4	3	20	80	100
5.7	Fundamentals of Advertising and Salesmanship	4	3	20	80	100
Group - IV Statistics						
5.6	Advanced Business Statistics - I	4	3	20	80	100
5.7	Advanced Business Statistics - II	4	3	20	80	100
SIXTH SEMESTER						
6.1	Modern Auditing and Practices	4	3	20	80	100
6.2	Income Tax - II	4	3	20	80	100
6.3	Costing Methods and Techniques - II	4	3	20	80	100
6.4	Indian Economies	4	3	20	80	100
6.5	Computer Application in Business - V	4+2	3	20	80	100
Group - I Finance and Taxation						
6.6	Indian Financial Services	4	3	20	80	100
6.7	Goods and Services Tax- II	4	3	20	80	100
Group - II Insurance and Banking						
6.6	General Insurance	4	3	20	80	100
6.7	Computer Applications in Banking	4	3	20	80	100
Group - III Marketing						
6.6	Service Marketing	4	3	20	80	100
6.7	Consumer Behavior and Marketing Management	4	3	20	80	100
Group - IV Statistics						
6.6	Advanced Business Statistics - III	4	3	20	80	100
6.7	Advanced Business Statistics - IV	4	3	20	80	100

Note: 1. WTHs/ Weekly Teaching Hours

2. ED- Examination Duration

3. IA: Internal Assessment Marks

4. SEE: Semester End Examination Marks

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GRADE-1 PRINCIPAL

**Course Structure  
for**

**Master of Commerce  
2017-18 and onwards**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI.**  
Department of Post Graduate Studies and Research in Commerce



**Syllabus of Master of Commerce**  
**(With effect from Academic Year 2016-17)**

**I & II Semester**



**M.Com**  
**Course Structure**

SEMESTER	PAPER CODE	COURSE	IA MARKS	SEM END MARKS	TOTAL	HRS/WEEK	CREDITS
I	1.1	Strategic Management	20	80	100	04	04
	1.2	Marketing Management	20	80	100	04	04
	1.3	Financial Management	20	80	100	04	04
	1.4	Economics for Managerial Decisions	20	80	100	04	04
	1.5	Organisational Behaviour	20	80	100	04	04
	1.6	Quantitative Techniques	20	80	100	04	04
				<b>120</b>	<b>480</b>	<b>600</b>	<b>24</b>
II	2.1	Corporate Restructuring	20	80	100	04	04
	2.2	Business Ethics & Corporate Governance	20	80	100	04	04
	2.3	Human Resource Development	20	80	100	04	04
	2.4	Managerial Accounting	20	80	100	04	04
	2.5	Business Environment	20	80	100	04	04
	2.6	OEC-Personality Development	20	80	100	04	04
				<b>120</b>	<b>480</b>	<b>600</b>	<b>24</b>



# RANI CHANNAMMA UNIVERSITY, BELAGAVI.

Department of Post Graduate Studies and Research in Commerce



Syllabus of Master of Commerce

(With effect from Academic Year 2017-18)

III Semester





**M.Com Course Structure**

Sem	Paper Code	Course	IA Marks	Sem End Marks	Total	Hrs/Week	Credits	
III	3.1	Business Research Methods	20	80	100	04	04	
	3.2	International Financial Management	20	80	100	04	04	
	<b>Group- A : Accounting and Finance</b>							
	3.3 A	Financial Markets and Institutions	20	80	100	04	04	
	3.4 A	Corporate Accounting	20	80	100	04	04	
	3.5 A	Accounting for Specialised Institutions	20	80	100	04	04	
	<b>Group- B: Cost Accounting</b>							
	3.3 B	Production and Operation Management	20	80	100	04	04	
	3.4 B	Cost Management	20	80	100	04	04	
	3.5 B	Cost Accounting Standards	20	80	100	04	04	
	<b>Group – C: Banking</b>							
	3.3 C	Bank Marketing	20	80	100	04	04	
	3.4 C	Banking in India	20	80	100	04	04	
	3.5 C	Management Accounting for Bankers	20	80	100	04	04	
	<b>Open Elective Course</b>							
	3.6	To be chosen from the other Department		20	80	100	04	04
		<b>Open Elective Course meant for other Departments - Personal Financial Planning</b>		20	80	100	04	04
	<b>Total Marks/Credits</b>			<b>120</b>	<b>480</b>	<b>600</b>	<b>24</b>	<b>24</b>
IV	4.1	E-Commerce	20	80	100	04	04	
	4.2	International Business	20	80	100	04	04	
	4.3	Project Report	50	50	100	04	04	
	<b>Group A: Accounting and Finance</b>							
	4.4 A	Security Analysis and Portfolio Management	20	80	100	04	04	
	4.5 A	Innovations in Accounting	20	80	100	04	04	
	4.6 A	Mutual Funds	20	80	100	04	04	
	<b>Group- B: Cost Accounting</b>							
	4.4 B	Techniques of Costing	20	80	100	04	04	
	4.5 B	Strategic Cost Management	20	80	100	04	04	
	4.6 B	Recent Developments in Cost Accounting	20	80	100	04	04	
	<b>Group – C: Banking</b>							
	4.4 C	Foreign Exchange and Risk Management	20	80	100	04	04	
	4.5 C	Financial Management in Commercial Banks	20	80	100	04	04	
	4.6 C	Fund Management in Commercial Banks	20	80	100	04	04	
<b>Total Marks/Credits</b>			<b>150</b>	<b>450</b>	<b>600</b>	<b>24</b>	<b>24</b>	



**RANI CHANNAMMA UNIVERSITY, BELAGAVI.**  
Department of Post Graduate Studies and Research in Commerce



Syllabus of Master of Commerce  
(With effect from Academic Year 2017-18)

IV Semester



### M.Com Course Structure

Sem	Paper Code	Course	IA Marks	Sem End Marks	Total	Hrs/Week	Credits	
III	3.1	Business Research Methods	20	80	100	04	04	
	3.2	International Financial Management	20	80	100	04	04	
	<b>Group- A : Accounting and Finance</b>							
	3.3 A	Financial Markets and Institutions	20	80	100	04	04	
	3.4 A	Corporate Accounting	20	80	100	04	04	
	3.5 A	Accounting for Specialised Institutions	20	80	100	04	04	
	<b>Group- B: Cost Accounting</b>							
	3.3 B	Production and Operation Management	20	80	100	04	04	
	3.4 B	Cost Management	20	80	100	04	04	
	3.5 B	Cost Accounting Standards	20	80	100	04	04	
	<b>Group – C: Banking</b>							
	3.3 C	Bank Marketing	20	80	100	04	04	
	3.4 C	Banking in India	20	80	100	04	04	
	3.5 C	Management Accounting for Bankers	20	80	100	04	04	
	<b>Open Elective Course</b>							
	3.6	To be chosen from the other Department		20	80	100	04	04
		<b>Open Elective Course meant for other Departments - Personal Financial Planning</b>		20	80	100	04	04
	<b>Total Marks/Credits</b>			<b>120</b>	<b>480</b>	<b>600</b>	<b>24</b>	<b>24</b>
	IV	4.1	E-Commerce	20	80	100	04	04
		4.2	International Business	20	80	100	04	04
4.3		Project Report	50	50	100	04	04	
<b>Group A: Accounting and Finance</b>								
4.4 A		Security Analysis and Portfolio Management	20	80	100	04	04	
4.5 A		Innovations in Accounting	20	80	100	04	04	
4.6 A		Mutual Funds	20	80	100	04	04	
<b>Group- B: Cost Accounting</b>								
4.4 B		Techniques of Costing	20	80	100	04	04	
4.5 B		Strategic Cost Management	20	80	100	04	04	
4.6 B		Recent Developments in Cost Accounting	20	80	100	04	04	
<b>Group – C: Banking</b>								
4.4 C		Foreign Exchange and Risk Management	20	80	100	04	04	
4.5 C		Financial Management in Commercial Banks	20	80	100	04	04	
4.6 C	Fund Management in Commercial Banks	20	80	100	04	04		
<b>Total Marks/Credits</b>			<b>150</b>	<b>450</b>	<b>600</b>	<b>24</b>	<b>24</b>	

  
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