RANI CHANNAMMA UNIVERSITY, BELAGAVI

Vidya Sangam

2020-21

Regulations & Syllabus
for
P.G. DEPARTMENT OF STUDIES IN
GEOGRAPHY

M. Sc I to IV Semesters
Choice Based Credit System
CBCS

WITH EFFECT FROM 2020-21 & ONWARDS

I. Introduction:

In order to lessen the pressure at the main campus Dharwad the P. G. Centre at Belgaum considering its cultural, commercial, industrial and educational background, this P. G. Centre came in to existence in June 1982 as an offshoot of the Karnatak University Dharwad.

With the introduction of Geography in many colleges, there was a growing demand for post-Graduate Studies and Research in Geography. Dr. D. M. Nanjunndappa, Former Vice Chancellor, Karnatak University Dharwad was instrumental in starting a Post Graduate Studies in Geography at Belgaum in 1982. The Department of Studies in Geography has initially attached to the Department of Geography of the Rani Pravathi Devi College Belgaum, as it had well equipped laboratories as well as qualified staff, later it was shifted to Karnatak University, Kittur Rani Channamma Post Graduate Centre Belgaum.

The P. G. Centre of the Karnatak University Belgaum after 28 years of its inception has become the independent university got status as Rani Channamma University Belagavi and Dr. B.R.Ananthan took charge as the first Vice-Chancellor of the new university. Now, Prof. M. Ramachandragowda, is leading as Vice-Chancellor of our university.

II. Vision:

Vision of the Department of Geography is to understand physic-cultural forms, processes and structures in different complex environmental systems on the surface of the mysterious mother earth and thereby empowering and enriching students with skills in decision making and planning for human welfare.

III. Goals & Objectives of the Department:

The following objectives have been kept in view while designing the M. Sc. degree and Ph.D. Programmes in Geography.

- To provide a fundamental of spatial information of the earth surface.
- To promote the study and research activities in various branches of Geography.
- To bring the geographical awareness among the masses for application of this Knowledge to sort out their day-to-day problems.
- To train the learners in the discipline for the dissemination of knowledge to the society and to be self-reliant.
- To educate the members of the geographical association for proper use, reuse conservation and preservation of natural and human recourses with sustainable approach.
- To develop the strong co-ordination among the different branches of the discipline to have better interaction with other disciplines.
- To arrange the seminars, workshops, training programmers etc for college teachers and members of the Geography Association from the different sectors of intellectual society.
- Organizing the professional tours for the M.Sc students every year.

IV. Admission Criteria:

A candidate should have passed B. A./B.Sc. degree in Geography as one of the optional subject at least 45% of marks in Geography as well as in B. A./B.Sc. as aggregate marks. Relaxation in respect of SC/St etc. will be followed as per prevailing rules of the University.

V. Intake Capacity:

The total intake of students for M.Sc. Geography is 20 seats under normal category and additional seats as directed by the university from time to time.

VI. Medium of Instruction:

The medium instruction shall be English.

VII. Attendance:

A minimum of 75% of attendance in each semester is necessary. Shortage of attendance will be dealt with as per the University rules. Marks shall be awarded to the students for attendance as specified by the university as shown below:

- More than 90 % attendance : 3 Marks
- 80 to 90 % attendance : 2 Marks
- 75 to 80 % attendance : 1 Marks
- Less than 75 % attendance : Not eligible

VIII. Academic Programmes Offered:

- Two years M.Sc Course (i.e. four semesters).
- M. Phil and Ph.D Programmes in Geography.
- P.G Diploma in Tourism.

IX. Scheme of Instruction:

The Department of Geography offers M. Sc degree in Geography. It is two years degree programme. The entire course consists of four semesters and each semester comprising of *four theory papers*, each of (80+20) 100 marks and *two practical's* each of (80+20) 100 marks. In case of M. Sc IIIrd and IVth semester, *three optional* papers on choice base each of (80+20) 100 marks (i.e. candidates have to select any one).

The duration of theory paper will be four (04) hours per week and the duration of practical paper will be four (04) hours per week in each semester. Each theory paper will have 5 modules/ units (divided into chapters/units). The duration of each semester is being 16 weeks excluding examination period.

X. Scheme of Theory Examinations:

- Theory course shall carry 100 marks of which 80 marks allotted for semester end examination and 20 marks for internal assessment (IA).
- Each theory course will have a question paper of 3 hours duration and the maximum of 80 marks. Minimum marks to pass in each paper of theory are 40 percent.
- There shall be three sections in every question papers viz. A. B. & C. ***Section A*** shall have 6 questions of each 2 marks and candidates have to attempt 5 questions only (5X2=10 marks). ***Section B*** shall have 6 questions of each 10 marks and the candidates have to attempt 4 questions only (4X10=40 marks). ***Section C*** shall have 4 questions of each 15 marks and the candidates have to attempt 2 questions (2X15=30 marks).

XI. Scheme of Practical Examination:

- Each practical course shall carry **100 marks** of which **20 marks** are allotted for **IA** marks (out of which **10 marks** are allotted to **viva-voce**, **07 marks** are kept for practical records/ journals, and **03 marks** allotted for attendance = **20** marks). The 80 marks examination will be conducted at the end of each semester as per the instruction given by the university. Each practical course will have a question paper of 4 hours duration and the maximum of 80 marks.
- The practical examination is to be conducted in batches as per the university guidelines.
- There will be one internal examiner and one external examiner to conduct the practical examination for each batch in each semester.
- Minimum marks to pass in each paper of practical are 40 percent.
- Each candidate shall complete the laboratory work of the journal/practical records, it shall be certified and signed by both the concerned course teacher and the Head of the Department of Geography, to the effect that the candidate has completed the prescribed course in practical satisfactory and it should be produced at the time of practical examination. No students shall be allowed for the examination without completed journal/practical records.
- There is no provision for seeking improvement in practical paper examination and internal assessment marks. In case of the **Project/Dissertation work**, **20** marks are allotted for **IA** and **80** marks are allotted for the evaluation of the dissertation/ report and viva-voce at the end of the IV semester as per the direction of the concerned chairman of the department.
- **Note:** The concerned staff member should select a topic only at village/ block/taluka and district level with intensive field work for the preparation of dissertation report.

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RANI CHANNAMMA UNIVERSITY BELAGAVI

'Vidyasangam'

P.G. Department of Studies in Geography

Choice Based Credit System (CBCS)

M. Sc Ist Semester Geography

Paper No.	Subject Title	Theory/ Practical Hour per week	Core & Elective	Credits	Duration of Exam hours	Max. of marks	I.A marks	Total
	Theory paper:							
1.1	Geomorphology	4	Core	4	3	80	20	100
1.2	Climatology	4	Core	4	3	80	20	100
1.3	Oceanography	4	Core	4	3	80	20	100
1.4	Development of Geographical Thought	4	Core	4	3	80	20	100
	Practical paper:							
1.5	Practical-I *Toposheet and Weather Map Interpretation*	4	Core	4	4	80	20	100
1.6	Practical-II *Statistical Methods in Geography*	4	Core	4	4	80	20	100

M. Sc IInd Semester Geography

Paper No.	Subject Title	Theory/ Practical Hour per Week	Core & Elective	Credits	Duration of Exam. Hours	Max. of Marks	IA Marks	Total
	Theory paper:							
2.1	Human Geography	4	Core	4	3	80	20	100
2.2	Environmental Geography	4	Core	4	3	80	20	100
2.3	Cartography and Thematic Mapping	4	Core	4	3	80	20	100
2.4	Open Elective: OEC *For Competitive Examinations* (Choice any one) a) Geography of Natural Hazards & Disaster Management. b) Fundamentals of Physical Geography.	4 4	Elective Elective	4 4	3 3	80 80	20 20	100 100
	Practical paper:							
2.5	*Practical-I* ***Map Projections, Cartographic Instruments & Methods***	4	Core	4	4	80	20	100
2.6	*Practical-II* ***Analytical Techniques in Physical Geography.***	4	Core	4	4	80	20	100

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M. Sc III[rd] Semester Geography

Paper No.	Subject Title	Theory/ Practical Hour per week	Core & Elective	Credits	Duration of Exam hours	Max. of marks	I.A marks	Total
	Theory paper:							
3.1	Agricultural Geography	4	Core	4	3	80	20	100
3.2	Fundamentals of Remote Sensing & GIS	4	Core	4	3	80	20	100
3.3	Optional Papers: *Choice any one*: a) Demography & Population Geography b) Geography of Tourism and Recreation c) Resource Geography	 4 4 4	 Core Core Core	 4 4 4	 3 3 3	 80 80 80	 20 20 20	 100 100 100
3.4	Open Elective: *For Competitive Examinations* (Choice any one) a) Regional Geography of India b) Regional Geography of Karnataka	 4 4	 Elective Elective	 4 4	 3 3	 80 80	 20 20	 100 100
	Practical paper:							
3.5	Practical-I ***Quantitative Techniques in Geography***	4	Core	4	4	80	20	100
3.6	Practical- II ***Study of Aerial Photographs & Satellite Imageries***	4	Core	4	4	80	20	100

M. Sc IV[th] Semester Geography

Paper No.	Subject Title	Theory/ Practical Hour/ Week	Core	Credits	Duration of Exam Hours	Max. of Marks	IA Marks	Total
	Theory paper:							
4.1	Regional Planning and Development	4	Core	4	3	80	20	100
4.2	Settlements Geography	4	Core	4	3	80	20	100
4.3	Research Methodology in Geography.	4	Core	4	3	80	20	100
4.4	Optional Papers: Choice any one: a) Geography of Gender & Health b) Urban Planning & Development c) Rural Land use Planning	 4 4 4	 Core Core Core	 4 4 4	 3 3 3	 80 80 80	 20 20 20	 100 100 100
	Practical paper:							
4.5	Practical-I : ***Conventional and GPS Surveying.***	4	Core	4	4	80	20	100
4.6	Practical- II ***Project/Field Work/ Dissertation***	4	Core	4	4	80	20	100

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M. Sc Ist Semester Geography

Paper No.	Subject Title	Theory/ Practical Hour per week	Core & Elective	Credits	Duration of Exam hours	Max. of marks	I.A marks	Total
	Theory paper:							
1.1	**Geomorphology**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
1.2	**Climatology**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
1.3	**Oceanography**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
1.4	**Development of Geographical Thought**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
	Practical paper:							
1.5	**Practical-I** ***Top sheet and Weather Map Interpretation***	**4**	**Core**	**4**	**4**	**80**	**20**	**100**
1.6	**Practical-II** ***Statistical Methods in Geography***	**4**	**Core**	**4**	**4**	**80**	**20**	**100**

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M. Sc Ist Semester Geography

PAPER 1.1 GEOMORPHOLOGY

Objectives: The objective of the course is to familiarize the students with the need for understanding of Geomorphology with reference to certain fundamental concepts, focusing on the union of Geomorphology in the earth materials and the processes with or without an element of time. Process component of Geomorphology is segmented into the internal and external processes of landscape evolution. The students have to be sensitized to background knowledge of Geology and Environmental Sciences.

Course Structure:

Unit- I	Definition, Meaning and Scope of Geomorphology, Recent Trends in Geomorphology	06 hours
Unit- II	Principles of Geomorphology, Geological Time-Scale, Theories of Continental Drift and Plate Tectonics and Interior of the Earth.	12 hours
Unit- III	Concept of Isostasy, Rocks: Meaning, Origin, and its Classification and its properties.	10 hours
Unit- IV	Earth Movements: orogenic & epeirogenic movements and Faults, Folds and resultant landforms, Earthquakes and Volcanoes distribution and their effects.	12 hours
Unit- V	Geomorphic Processes: Weathering and its types, Cycle of Erosion: W.M.Davis and W.Penck, Morphometric Analysis, and Land forms made by River, Wind, Glacier and Underground Water.	12 hours

REFERENCES:

1	Christopherson, R.W.(1995)	Elemental Geosystems: A Foundation in Physical Geography, Prentice Hall Englewood Cliffs, New Jersey
2	Dayal P, (1996)	A Textbook of Geomorphology, Shukla Book Depot, Patna
4	Homes. A (1965)	Principals of Physical Geology,3rd edition ELBSS ed.
5	Monkhouse. F. J(1960)	Principals of Physical Geography, London
6	Majid Hussen (1986)	Physical Geography
7	Savindar. Singh (1999)	Physical Geography, Prayag Pustak Bhavan, Allahabad
8	Spark B. W.	Geomorphology, Longman, London
9	Strahler A. (1996)	Physical Geography; science and system of the Human
10	Strahler. A & A. Strahler-(1992)	Physical Geography, John Wiley & Sons, New York
11	Thornbury, W.D.(1998)	Principles of Geomorphology, 2nd New Age International Press, New Delhi
12	Whittone, J. (1984)	Dictionary of Physical Geography, Penguin Books
13	S. S. Najannavar	Physical Geography (Kannada Version)
14	Ranganath	Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2008

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M. Sc Ist Semester Geography

PAPER 1.2 CLIMATOLOGY

Objectives: The aim of this course is to provide an understanding of weather and climate phenomena, dynamics of global climates and generation of climatic data, information and their application, interaction between living organisms with climate and physical environment. Recent geographical explorations of the terrestrial atmosphere by means of improved sounding balloons, aircrafts, meteorological rockets and weather satellites have added new dimensions to our knowledge of the geography of the atmosphere.

Course Structure:

Unit- I	Nature and Scope of Climatology and its relationship with Meteorology, Weather and Climate, Composition & Structure of the Atmosphere, Insolation and its distribution on the earth's surface, Horizontal and Vertical Distribution of Temperature and Isothermal Maps.	14hrs
Unit- II	Pressure Belts, Planetary Winds, Mechanism of Monsoons, Local Winds and Jet Streams. Clouds and its types.	08 hrs
Unit- III	Hydrological Cycle, Humidity and Process of saturation, forms of Condensation, precipitation, Rainfall and its types.	10 hrs
Unit- IV	Origin and Source Regions of Air Masses- Classification of Air Masses, Cyclones: causes and consequences of tropical and temperate cyclones, Thunderstorms and Fronts.	10 hrs
Unit- V	Climatic Classification- Koppen's and Thornthwaite, World Climatic Changes, El-nino, Lanino and its effect, Global Warming, Depletion of Ozone layer, Human Impact on Climate, Environmental Impact on Climate and Society's Response.	10 hrs

REFERENCES:

1	Byers R.H. (1974)	General Meteorology McGraw Hill BKCo New York
2	Cristch Field	Principles of Climatology; Prentice Hall, London
3	Lal D. S.(2003)	Climatology Prayag pustak Bhavan, Allahabad
4	Oliver J. E.- (1973)	Climate & Mans Environment, John Wiley & Sons, New York.
5	Pettersons –(1969)	Introduction to Meteorology, McGraw Hill,New York
6	Richl H :(1972)	Introduction to Atmosphere, McGraw Hill, New York.
7	Savindra Sing(2000)	Climatology Prayag Pustak Bhavan, Allahabad Book Co., New York.
8	Sellers W.D (1965)	Physical Climatology, University of Chicago Press, New York
9	Trewartha GT(1968)	An Introduction to Climate, McGraw Hill BK Company, New York
10	Ranganath	Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2008
11	S. S. Najannavar	Physical Geography (Kannada Version)

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M. Sc Ist Semester Geography

PAPER 1.3 OCEANOGRAPHY

Objectives: The main objective of this paper is to provide in-depth understanding of different oceans, such as evolution of the oceans, physical and chemical properties of seawater, atmospheric and oceanographic circulation. Further, it also aims to acquire knowledge of the marine life and characteristics of marine environment and the impact of man on the marine environment.

Course Structure:

Unit- I	Nature and Scope of Oceanography, Distribution of Land and Water, Hypsographic Curve, Bottom Relief of the Oceans- Continental Shelf, Slope, Ocean Plains and Ocean Deeps.	10 hours
Unit- II	Origin and Distribution of Submarine Canyons, Physical and Chemical Properties of Ocean Water, Temperature and Salinity of Pacific, Atlantic and Indian Oceans.	10 hours
Unit- III	Movements and Circulation of Ocean Water- Waves, Tides and its types, Theories of Tides- Progressive theory, Stationary Wave theory, Coral reefs: types and distribution of Coral Reefs.	12 hours
Unit- IV	Ocean Currents: Origin, Cause and Effects of Ocean Currents, Ocean Currents of Atlantic, Pacific and Indian Oceans.	10 hours
Unit- V	Ocean Deposits: Terragenious and Paleagic Deposits, Oceans as a Storehouse of Mineral Wealth and Food Recourses, Marine Pollution, Human Impact on Marine Environment, Recent Trends in Oceanography.	10 hours

REFERENCES:

1	C.A.M. King	Oceanography for Geographers
2	Dasagupta and Kapoor	Principles of Physical Geography, S. Chand and Co. New Delhi.2001
3	Lal D.S.	Oceanography
4	Ranganath	Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2008
5	Sharma and Vatal	Ocenography for Geographers
6	Vatal and Sharma	Oceanography for Geographers
7	S. S. Nanjannavar	Principles of Physical Geography, (Kannada Version),
8	Ranganath	Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2008

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M.Sc Ist Semester Geography

PAPER-1.4 DEVELOPMENT OF GEOGRAPHICAL THOUGHT

Objectives: This paper is intended to acquaint the students with distinctiveness of geography as a field of learning in social science and science as well as in natural science. The philosophy and methodology of the subject is discussed in length and to provide the students for comparative understanding of the development of the history of geographic thought. Now geographers and non-geographers have shown keen interest in the philosophy of geography.

Course Structure:

Unit- I	Introduction: Meaning and scope of Geography, Some specific definitions, Fundamentals of concepts, Nature, Scope and Philosophy of Geography. Approaches to study of Geography. Branches of Geography and Relationship with Other Sciences.	08 hours
Unit- II	Major Schools of Geographical Thought: i) Ancient : Greek, Roman and Chinese ii) Medieval : Arabs, Christians and Chinese iii) Modern: German, French, Russian, British and American.	10 hours
Unit- III	Dualism and Dichotomies in Geography: i) Systematic Geography Vs Regional Geography ii) Physical Geography Vs Human Geography iii) Determinism Vs Possibilism iv) Deductive (Theoretical) Vs Inductive (Empirical) v) Geography as a Science Vs Geography as a Arts vi) Contemporary Geography Vs Historical Geography	12 hours
Unit- IV	Themes in Geography: i)Landscape theme ii)Spatial theme iii) Geometric theme iv) Man-Environment relationship theme v)Areal differentiation theme v) Areal differentiation theme	12 hours
Unit- V	Development of Modern Geography; Quantitative Revolution, Scientific Method, Hypothesis, Theories, Models, Analogies and Paradigms.	10 hours

REFERENCES:

1	Adhikari Sudeepta (1972)	Fundamentals of Geographic Thought Chaitanya Publishing House, Allahabad
2	Cook and Johnson	Trends in Geography, Pergamow Press London
3	Dickinson R.E.(1969)	The Makers of Modern Geography, Rout/Edge & Kegan Paul, London
4	Dixit R.D. (1999)	Development of Geographic Thought, Longmans India Limited
5	Free Man T.w.(1965)	Geography As Social Science, Harper International Edition, Harper & Row Publishers, New York
6	Harvey D. (1969)	Explanation in Geography London, Edward Arnold
7	Hartshorne R.(1959)	Perspective on the Nature of Geography Rand McNally, Chicago
8	Majid Hussain (1999)	Geographic Thought Rawat Publishing House, Jaipur
9	Richard Peet (1977)	Radical Geography - Alternative View Points On Contemporary Social Issue,Methuen & Co. Ltd, London
10	Holt Jensen, Arid: (1998)	Geography: History and Concepts, Sage Publication, New Delhi

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P. G. Department of Studies in Geography

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M.Sc Ist Semester Geography

PAPER-1.5 -TOPOSHEET AND WEATHER MAP INTERPRETATION

PRACTICAL-I

Objectives: The objective of this course is to introduce to the students about some basic information and concepts of Survey of India toposheets as well as ordinance survey toposheets, and to train the students to handle these topographical maps and applied to various themes in Geography.

Course Structure:

Unit- I	**SOI Toposheets**: Meaning and its importance, Indexing of SOI Toposheets, Marginal Information of Toposheets, Grid reference- Eastings & Northings, Findings of four and six figure grid references, Conventional signs and symbols used in Toposheets and area measurement.	10 hours
Unit- II	Theoretical background for the identification and interpretation of various features mainly (without supplying the toposheets) a) Landforms - mountains, plains and plateaus b) Drainage - trellis, dendritic, parallel, radial & dispersing c) Settlements - nucleated/compact, dispersed/scattered, linear and radial patterns. d) Transport - types of roads, railways and air.	10 hours
Unit-III	a) Over all interpretation of given SOI and US Toposheets of the following features: (at least each of two exercise) 1. Relief 2. Drainage 3.Vegetation 4. Settlements 5. Means of communication 6. Irrigation and Landuse b) Drawing of cross section and calculation of Vertical Exaggeration (at least three exercises)	10 hours
Unit-IV	IMD Weather Maps: Conventional signs and Symbols. Use of the Meteorological Instruments: Thermometers , Dry and Wet- Bulb Thermometer, Aneroid Barometer, Wind Vane, Cup Anemometer, Hygrometer and Rain Gauge stations.	10 hours
Unit-V	Interpretation of Indian weather maps (season-wise) and Foreign weather maps – Station Model and interpretation of Foreign weather maps (at least two exercises).	12 hours

REFERENCES

1	Ashish sarakar	Practical Geography A Systematic Approach Orient Longman Limited, Kolkatta
2	Gopal Singh	Map Work and Practical Geography, 3rd edition, Vikas Publishing House,New Delhi
3	Gupta K.K and Tyagi V.C	Working with maps Survey of India Department of Science and Technology, Govt of India, Dehra Dun 1992
4	Mishra R.P	Fundamentals of Cartography1969, Prasaranga, University of Mysore, Mysore
5	Monkhouse FJ	Maps and Diagram Mathuen and Co, Ltd., London, 1952
6	Saha & P. Basu	Advanced Practical Geography
7	Singh. R.L	Elements of Practical Geography Kalyani Publishers, New Delhi, 1979

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M.Sc Ist Semester Geography

PAPER-1.6 STATISTICAL METHODS IN GEOGRAPHY

PRACTICAL-II

Objectives: The objective of this course is to train the students in the art of representing the geographic, demographic and Socio-Economic database of any area through simple statistical methods and cartograms. It also introduces some basic statistical procedures, limitations interpretation etc. and train students to apply statistical methods to the various themes in Geography.

Course Structure:

Unit- I	Definition of Statistics, Importance & use of statistical techniques in Geography, Sources of data, Methods of data collection and Sampling method and its types.	10 hours
Unit- II	Frequency Distribution-Tally bars and Frequency table, Histogram, Frequency curve, Frequency Polygon, Ogive curve and Cumulative Frequency.	10 hours
Unit- III	Measures of Central Tendency: Calculation of mean, median and mode. Absolute measurements - Arithmetic mean, Geometric mean and Standard deviation.	10 hours
Unit- IV	Measurement of Dispersion: Significance of measuring variation, Difference between dispersion and Skewness Range, Quartile deviation, Mean deviation, and Standard deviation.	10 hours
Unit-V	Correlation Analysis: Types of correlation, Karl Pearson's Product moment coefficient correlation Spearman's rank order correlation, Regression analysis, Chi-Square Test, Time series, Moving averages and Least square method.	12 hours

REFERENCE:

1	Aslam Mahmood(1998)	Statistical Methods in Geographical Studies
2	Cole,J.P.&King,C.A.M.(1968)	Quantitative Techniques in Geography
3	Elhance, D.N. (1972)	Fundamentals of Statistics, Kitab Mahal, Allahabad
4	Gregory, S.(1968)	Statistical Methods and the Geographer Longman, London.
5	Gupta, C.B.(1978)	An introduction to statistical Methods, Vikas Publications House, New Delhi
6	Hoel P.G.	Elementary Statistics, Wiley, New York.
7	Hemawati	Statistical Methods for Geographers
8	King, L.J. (1991)	Statistical Analysis in Geography
9	Pijushkanti Saha & Partha Basu	Advanced Practical Geography
10	Singh R. L.	Elements of Practical Geography

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P. G. Department of Studies in Geography

Choice Based Credit System (CBCS)

M. Sc IInd Semester Geography

Paper No.	Subject Title	Theory/ Practical Hour per Week	Core & Elective	Credits	Duration of Exam. Hours	Max. of Marks	IA Marks	Total
	Theory paper:							
2.1	**Human Geography**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
2.2	**Environmental Geography**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
2.3	**Cartography and Thematic Mapping**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
2.4	**Open Elective: OEC** ***For Competitive Examinations*** **(Choice any one)** **a) Geography of Natural Hazards & Disaster Management.** **b) Fundamentals of Physical Geography.**	**4**	**Elective**	**4**	**3**	**80**	**20**	**100**
	Practical paper:							
2.5	***Practical-I*** ***Map Projections, Cartographic Instruments & Methods***	**4**	**Core**	**4**	**4**	**80**	**20**	**100**
2.6	***Practical-II*** ***Analytical Techniques in Physical Geography and Thematic Mapping***	**4**	**Core**	**4**	**4**	**80**	**20**	**100**

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M. Sc IInd Semester Geography

PAPER-2.1 HUMAN GEOGRAPHY

Objectives: The objective of this course is to understand the nature of man- environment relationship and human activities capability to adopt and modify the environment under its varied conditions from primitive life style to the modern living. To identify and understand environment and population in terms of their quality and spatial distribution pattern and to comprehend the contemporary issues facing the global community.

Course Structure:

Unit- I	Definition, Nature and Scope of Human Geography, Branches of Human Geography, Nomothetic and Idiographic Approaches, Development of Human Geography – Germans, French and American contribution.	10 hours
Unit- II	Broad Racial Groups and their distributional pattern. Types- Caucasoid, Negroid and Mangolied. Major Language Groups and Major World Religions.	10 hours
Unit- III	Man and Environment: Concept of environmentalism Man's Impact on nature through his economic activities of Agriculture, Mining, Forestry and Manufacturing.	10 hours
Unit- IV	Primitive Population Groups- Mode of Life of Pygmies, Bushman, Sekais, Semangs, Kiragies and Eskimos, Indian Tribal Groups- Todas, Gonds, Bhils and Nagas.	10 hours
Unit-V	World Population – Growth and distribution of Population, Density of Population, Factors affecting the distributional pattern of population, Human Migration – types, Causes and Consequences. Migration policies in India and USA.	12 hours

REFERENCE:

1	Davis. W	Man and Earth
2	Dickens and Pitts (1963)	Introduction to Human Geography,
3	Harm d. Blij (1992)	Human and Economic Geography, Macmillan Publishing Company, New York
4	Hussain M (2003)	Human Geography, Rawat Publications, Jaipur
5	Money. D. C	Introduction to Human Geography
6	Nellson, Gabler Vining (1995)	Human Geography, People, Cultures and Landscapes
7	Ranganath (2002)	Principles of Human Geography (Kannada Version) Vidyanidhi, Gadag
8	Rubenstein J.M	An Introduction to Human Geography, Macmillan Publishing Company, New Yark
9	Peter Hagget	Geography- A Modern Synthesis, Harper & Row Publishers, New York
10	Smith. D. M.	Human Geography- a Welfare approach

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RANI CHANNAMMA UNIVERSITY, BELAGAVI

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PAPER-2.2 ENVIRONMENTAL GEOGRAPHY

Objectives: The basic objective of this course is to apprise the students with the interrelationship between Man and his environment within which he lives and his linkages with other organisms. The course further aims to give broad perspective ideas of environment, ecology and ecosystem. The information and their interaction between living organisms with physical and cultural environment. The importance of conserving bio-diversity to maintain ecological balance has also been emphasized in this course.

Course Structure:

Unit- I	Nature, Scope and Significance of Environmental Geography, Meaning and types of Environment- Physical (abiotic) and cultural (biotic) and The Changing relationship of Man and Environment.	10 hours
Unit- II	Biomes- types of biomes, Importance and economic significance of forests, Afforestation and De-forestation, Social Forestry and Agro-forestry, National forest policy in India.	10 hours
Unit- III	Environmental Degradation- Nature and types of environmental Degradation; Causes and consequences of environmental degradation, Analytical study of Natural Hazards- Floods, Droughts, Earthquakes, Volcanoes, Cyclones and Tsunamis.	10 hours
Unit- IV	Environmental Pollution- Air, Water, Land and Noise Pollution and their Consequences, Environmental Policies ,Management of Environmental Quality, Environment and health.	12 hours
Unit-V	Green Revolution and its Impact on Environment, Global Warming; Ozone layer depletion and its consequences and Environmental Impact Assessment (EIA)	10 hours

REFERENCE

1	R.B. Singh(1990)	Environmental Geography, Heritage Publishers New Delhi,
2	Strahler. A.N.	The Earth Sciences, Haper International Education. New-york.
3	Strahler A.N.& Strahler.A.H	Geography of man's Environment, John wiley & sons
4	Savinder Singh	Environmental Geography, Prayag Pustak Bhawan,1997
5	Kates,BI &White.GF.	The Environment as Hazards, Oxford, New York
6	R.B.Singh(Ed)	Disaster Management, Rawat Publication, New Delhi,
7	Saxena.H.M (2000)	Environmental Geography, Rawat publication, New Delhi
8	H.K.Gupta(Ed)	Disaster Management, University Press, India, 2003
9	Gold Smith Edward	The Earth Report- The essential Guide to Global Issues, Price stern solan Inc californa.USA (et.al)

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RANI CHANNAMMA UNIVERSITY, BELAGAVI

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CBCS (Choice Based Credit System)

M.Sc IInd Semester Geography

PAPER-2.3 CARTOGRAPHY AND THEMATING MAPPING

Objectives: The objectives of this course are to train the students in the art of representing population and socio-economic data from different regions through the simple statistical and cartographic methods. The course is further aimed at familiarizing the students to prepare various types of maps with local global and regional level problems.

Course Structure:

Unit- I	Nature of Cartography: Meaning of Maps, Advantages and disadvantages of Maps and Photographs. Types of maps, map scales and its uses. History of cartography in India. Map as a tool in geographical studies, and Cartography as a science of human communication.	10 hours
Unit- II	Map Making Process: Collection of data- Compilation of physical and cultural details- Elements of generalization, simplification and classification.	10 hours
Unit- III	Concepts and Methods: Measurement of Geographical Variables (Nominal, Ordinal, Interval and Ratios), Symbolization: Quantitative and Qualitative data for map making.	10 hours
Unit- IV	Map Design**: a)** Objectives of Map Design and Layout, **b)** Design Process, **c)** Perceptual Considerations- Graphic elements, Visual variables and Classes of symbols, **d)** Controls of map design- Purpose, Reality, Available data, Map scale and Design of map planning **e)** Constraints in map design. **(***Unit-III & IV is based on Lab work)*	12 hours
Unit-V	Printing and publishing: Computer cartography- hardware and Software, Planning and Process related to printing and duplicating of maps, GIS technology as a tool & Digital mapping.	10 hours

REFERENCE:

1	Ashish sarakar	Practical Geography A systematic Approach, Orient Longman Limited, Kolkatta (1986)
2	Burrough P.A.	Principles of GIS for Land Assessment
3	Kang-tsung Chang (2008)	Introduction to Geographic Information Systems Tata McGraw Hill
4	Misra R.P. and Ramesh.(1989)	Fundamentals of Cartography, Concept Publishing Company, New Delhi
5	Nag, P .ed.,(1992)	Cartography and Remote Sensing Concept Publishing Company, New Delhi
6	Robinson, A H, Sale A H, Morrison JL, & Muerake (1985)	Elements of Cartography, John wiles and sons New-York

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PAPER 2.4 (a) GEOGRAPHY OF NATURAL HAZARDS AND DISASTER MANAGEMENT
(Open Elective Subject - OEC)

Objectives: The purpose of this paper is to apprise the students to understand basic components and types of environment and its significance. The course also aims to provide overview of environmental hazards and to distinguish between natural and man-made hazards, further it aims to sensitize the students to overcome with these environmental problems and to train the students to take active part in the management programmes.

Course Structure:

Unit- I	Meaning of Natural Hazards and disaster, origin and their nature, Significance of the study	08hours
Unit- II	Classification of Environmental hazards-Climatic, Geomorphic, Geological, Biological and anthropogenic (human) induced hazards and their effects.	10 hours
Unit- III	Analytical study of Naturals Hazards Viz.- Earthquakes, Volcanoes, Landslides and Avalanches, Flood and droughts, Cyclones, Tsunamis, Soil Erosion, De-forestation, Degradation and Bio-diversity.	12 hours
Unit- IV	Emerging Approaches in Disaster Management-Three Stages- Pre-disaster Stage (Preparedness), Emergency Stage and Post-Disaster stage (Rehabilitation).	12hours
Unit-V	Disaster Management Policies- National level, State level Block level and village level. Role of NGO's, Management Authorities and Societies.	10 hours

REFERENCE:

1	R.B. Singh(1990) (Ed)	Environmental Geography, Heritage Publishers New Delhi,
2	Savinder Singh	Environmental Geography, Prayag Pustak Bhawan,1997
3	Kates,B.I & White. G.F.	The Enviornment as Hazards, Oxford, New York,
4	Strahler A.N.& Strahler.A.H	Geography of man's Environment, John wiley & sons
5	R.B.Singh(Ed)	Disaster Management, Rawat Publication, New Delhi,
5	Saxena.H.M (2000)	Environmental Geography, Rawat publication, New Delhi
6	Kates,BI &White.GF.	The Environment as Hazards, Oxford, New York
7	H.K.Gupta(Ed)	Disaster Management, University Press, India, 2003

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PAPER – 2.4 (b). FUNDAMENTALS OF PHYSICAL GEOGRAPHY

(Open Elective Subject - OEC)

Objectives: The objective of the course is to familiarize the students with the need for understanding of physical geography with reference to certain fundamental concepts, focusing on the concepts of Geomorphology. Process of component of Geomorphology is segmented into the internal and external processes of landscape evolution. Students are trained in understanding of physical and internal aspects of the mother earth.

Course Structure:

Units	Topic	Teaching Hours
Unit -I	**Introduction to Physical Geography:** The Nature, Scope of Physical Geography, Significance of Physical Geography.	08 hrs
Unit -II	**Lithosphere :** Latitude and Longitudes, Rotation and Revolution of the earth, Interior of the Earth, Weathering and its types; Rocks; origin, types. Earth Movements: Folds and Faults, & related land forms. Earth-quakes and Volcanoes and its distribution, causes and effects,	12 hours
Unit - III	**Atmosphere:** Definition and significance of Climatology, Weather and Climate and its Controlling factors. Composition and structure of atmosphere, Insolation (Heat Budget), Atmospheric Pressure and pressure belts. Planetary Winds, Cyclones and Anti-Cyclones. Hydrological Cycle, Clouds and its types, and types of Rainfall.	12 hours
Unit - IV	**Hydrosphere:** Definition & Significance of Oceanography, Distribution of Land and Water bodies, Hypsographic curve, Bottom relief of Oceans: continental self, slope and deep sea plains. Distribution of Temperature and Salinity of Ocean Water, Tides and types of tides, Coral reefs and its types	12 hours
Unit -V	Global warming. Greenhouse effect. Ozone layer depletion. Oceans as a store house of mineral and food resources. Human impact on climate and environment.	08 hours

REFERENCE:

1. Physical Geography: Strahler & Strahler
2. Physical Geography: R. N. Tikka
3. Physical Geography: Majid Hussain
4. Physical Geography: Das Gupta & Kapoor
5. Physical Geography (Kan):Mallappa P
6. Physical Geography (Kan): Ranganath
7. Physical Geography (Kan): S.S. Nanjannavar
8. Climatology : B.S Negi
9. Fundamentals of Physical Geography: F. J. Mankhouse

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PAPER-2.5 PRACTICAL-I

MAP PROJECTIONS, CARTOGRAPHIC INSTRUMENTS AND METHODS.

Objectives: The objective of this course is to train the students in the art of representing parallels and meridians on the plain surface. The techniques of surveying and map projections necessary for accurate geographical positioning and preparing physical plans of an area also form parts of the practical exercises.

Course Structure:

Unit- I	Map Projections – Definition, Classification and Importance. Method of Construction- Perspective and non-perspective	10 hours
Unit- II	Construction, Properties and Uses of the following Projections: a) *Conventional Map Projections*: Gnomonic, Stereographic and Orthographic projections b) *Cylindrical Projections* : Simple Cylindrical, Cylindrical equal area and Mercator's projections c) *Conical Projections* : Simple Conical Projection with one standard parallel, Conical projection with Two standard parallel and Bonne's projection	20 hours
Unit- III	Enlargement and Reduction of maps by Pantograph: Measurement of length by Opisometer and Measurement of area by Planimeter.	16hours
Unit- IV	Use of Projections in the study of Geography and Significance of Cartographic Instruments and Methods.	06 hours

REFERENCE:

1	Ashish Sarakar	Practical Geography A systematic Approach Orient Longman Limited, Kolkatta
2	M. Salar Masood	Map Projections.
3	Ranganath& Mallappa (1986)	Map Projections,(Kannada Version), Chethana Book House, Mysore
4	Raisz E (1948)	General Cartography, Tata-MC-Graw Hill, New York.
5	Singh. R.L.	Elements of Practical Geography Kalyani Publishers, New Delhi, 1979.
5	Pijushkanti Saha & Partha Basu	Advanced Practical Geography

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PAPER-2.6 PRACTICAL-II
ANALYTICAL TECHINIQUES IN PHYSICAL GEOGRAPHY

Objectives: The objective of this course is to introduce some basic methodological procedures to the students to understand physical features of the earth surface. It aims to train the students to handle these tools and techniques towards analyzing the geographical problems.

Course Structure:

Unit	Topic	Teaching Hours
Unit- I	Profile Drawing: Introduction, Types of profiles, method of drawing of Serial of Profiles- Superimposed profiles, Projected profiles and Composite profiles.	08 hours
Unit- II	Slope analysis: Wentworth's method and Smit method by using Choropleth and Isopleth method.	12 hours
Unit- III	Morphometric analysis- Stream order analysis, Bifurcation ratio analysis, Sinuosity index, Drainage density analysis and Drainage frequency analysis.	12 hours
Unit- IV	Block Diagrams: Perspective and non-perspective, One point perspective of block diagrams and Two point perspective block diagrams	08 hours
UNIT-V	Comfort diagrams- Wind vane, Climograph, Hythergraph, and Ergo-graph and their significance.	08 hours

REFERENCE:

1	Singh R.L. (1979)	Elements of Practical Geography Kalyani Publishers, New Delhi
2	R. P. Mishra (2003)	Fundamental Cartography, Concept Publications, New Delhi
3	R.Hammond and P.Mecullagh (1975)	Quantitative Techniques in Geography Claredon Press, Oxford.
4	Anson R.W	Colour use guidelines for mapping and visualization in modern Geography" Oxford
5	Pijushkanti Saha & Partha Basu	Advanced Practical Geography
6	Ashish Sarakar	Practical Geography A systematic Approach Orient Longman Limited, Kolkatta
7	Ranganath& Mallappa (1986)	Map Projections,(Kannada Version), Chethana Book House, Mysore

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RANI CHANNAMMA UNIVERSITY BELAGAVI

'Vidyasangam'

P. G. Department of Studies in Geography

Choice Based Credit System (CBCS)

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Paper No.	Subject Title	Theory/ Practical Hour per week	Core & Elective	Credits	Duration of Exam hours	Max. of marks	I.A marks	Total
	Theory paper:							
3.1	Agricultural Geography	4	Core	4	3	80	20	100
3.2	Fundamentals of Remote Sensing & GIS	4	Core	4	3	80	20	100
3.3	**Optional Papers:** *(Choice any one)*: a) Demography & Population Geography b) Geography of Tourism and Recreation c) Resource Geography	 4 4 4	 Core Core Core	 4 4 4	 3 3 3	 80 80 80	 20 20 20	 100 100 100
3.4	**Open Elective:** *For Competitive Examinations* (Choice any one) a) Regional Geography of India b) Regional Geography of Karnataka	 4 4	 OEC OEC	 4 4	 3 3	 80 80	 20 20	 100 100
	Practical paper:							
3.5	**Practical-I** ***Quantitative Techniques in Geography***	4	Core	4	4	80	20	100
3.6	**Practical- II** ***Study of Aerial Photographs & Satellite Imageries***	4	Core	4	4	80	20	100

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PAPER-3.1- AGRICULTURAL GEOGRAPHY

(Optional)

Objectives: To familiarize the students with concept, origin, and development of agriculture; and to examine the role of agricultural determinants towards changing pattern of crops, specialization, intensity, productivity. The course further aims to familiarize the students with the application of various theories models and classification schemes of cropping pattern and productivity. The objective of the course is to discuss the environmental, technological and socio-economic issues in agricultural sector with special reference to India and world.

Course Structure:

Unit- I	Nature, Scope & Significance of Agricultural Geography, Origin & diffusion of agriculture and approaches to the study of agriculture geography, whittlesey's world classification of agriculture regions.	10 hours
Unit- II	Determinants of agriculture: Physical, Economic, Social, Institutional and Technological. Green Revolution, White Revolution, Blue Revolution and their significance.	12 hours
Unit- III	Models in Agricultural Geography – Nature and significance of Agricultural models, Classification of models, Input, output-Decision making- Diffusion. Von-Tunnen's model and Johansson's model.	10 hours
Unit- IV	Productivity & Efficiency: Methods of Agricultural Regionalization: Weaver, Doi, Rafiullah, Athawale Crop Combination regions. Crop Concentration by Bhatia. S. S and Agricultural Efficiency regions by Kendall's.	12 hours
Unit-V	Ecological Implications of Green Revolution- Salinization, Water logging, Soil pollution and Health Hazards.	08hours

REFERENCE:

1	M. Shafi, (2006)	Agricultural Geography" Dorling Kindersley (India) Pvt, Ltd. Licensees of Pearson Education in South Asia. New Delhi.
2	Majid Hssain, (2002)	Systematic Agricultural Geography" Rawat Publication, Jaipur.
3	Noor Mohammed (ed)	Perspectives in Agricultural Geography", Vol. I to II, Concept publishing company, New Delhi.
4	Sing and Dhillin,(2000):	Agricultural Geography", Tata Mcgrow – Hill publishing company ltd, New Delhi.
5	Jasbir Sing,	Agricultural Geography.

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PAPER-3.2 FUNDMENTALS OF REMOTE SENSING AND GIS

Objectives: The main objective of the course is to introduce to the students the basic principles of Remote sensing and GIS, to indicate the methods of visual and digital interpretations of satellite imageries. To introduce the students that GIS is a tool of spatial science and art of representing various types of data with aid of GIS technology. The course further aimed at introducing the basic elements of GIS, and remote sensing, methodology and its application in the study of geography.

Course Structure:

Unit- I	Remote Sensing: Definition, nature and scope – types of Remote Sensing, Comparison of Ariel remote sensing and satellite remote sensing – advantages and limitation of satellite remote sensing.	10 hours
Unit- II	EMR and Remote sensing: Energy sources - Electro Magnetic s Radiation – Spectral regions –EMR & its interaction with matter & atmosphere, Sensors and platforms- Landsat, SPOT, IRS & Radarsat, - Thermal & Microwave remote sensing,	10 hours
Unit- III	Aerial photography: Introduction to Aerial photography, types of aerial photographs; Elements of photo image recognition. Stereoscopes & stereo pairs. Photogrammetry: - Mapping of Landuse / Landforms; interpretation of rock types, landuse, cultural features, water resources and vegetation.	12 hours
Unit- IV	Definition, Meaning, Purpose and significance of GIS, Basic concept of Geographical Information System (GIS). Introduction to Geographic Information system. Advantages, Disadvantages,	10 hours
Unit-V	Components of GIS,- History of GIS- Objectives of GIS - Spatial data, Attribute data, Integration of Spatial and Attribute data- Data Structure- Raster & Vector Components – Data input, output, Data Management. Application of GIS and data analysis.	10hours

REFERENCE:

1	Borrough P.A (1986),	Principles of Geographic information system for land resources, Clarendon press, Oxford.
2	Bernhardsen,Tor (1999)	Geographic Information Systems: An Introduction,
3	Chrisman N.R. (1997)	Remote sensing and Geographical information systems
4	Clarke, Keith C. (1999)	Getting Started with Geographic Information Systems,
5	Chang, Kang-taung (2002)	Introduction to Geographic Information Systems
5	Demers, Michael N. (2000)	Fundamentals of Geographic Information Systems,
6	Haywood, Ian (2000)	Geographical Information Systems, Longman
7	Sabbins.F.F (1987),	Remote sensing: principles and interpretations", W. H. Freeman and Co, New York.
8	Kang-Tsung Chang (2008)	Introduction to Geographic Information Systems, Tata McGraw Hill
9	Sabbins.F.F (1987),	Remote sensing: principles and interpretations W. H. Freeman and Co, New York.

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PAPER-3.3 –(a) DEMOGRAPHY AND POPULATION GEOGRAPHY (Optional)

Objectives: The objectives of this course are to understand the spatial and structural dimensions of population and emerging issues. The course is further aimed at familiarizing the students with global and regional level problems and also equips them for comprehending the Indian situation.

Course Structure:

Unit- I	Nature & scope of Demography and population Geography. Difference between demography & population. Population Geography as specialized branch. Significance of Sources of Population Data. Gender: Meaning and Concepts of Gender.	14 hours
Unit- II	Factors Affecting Population distribution population, Density of population distribution - World and India, Population Composition –Sex Ratio, Age Structure, Occupation, and Literacy ratio.	10 hours
Unit- III	Fecundity and Fertility-Determinants of Fertility and Mortality and factors affecting them, Population Growth and it's Changes in India. Demographic Transition Theory. Migration –Types of Migration, Causes and Consequences.	10 hours
Unit- IV	Population and resources – Optimum population, Over Population and Under Population, Population resource Regions, Malthusian Theory and Karl Marx's Theory of Population.	10 hours
Unit-V	Population problems and Policies in India. Policies in LDCs and MDCs. Methods population projections.	08 hours

REFERENCE:

1	Barrett H.R.(1992)	Population Geography, Oliver and Boyd Longman House,
2	Bhende Asha & Kanitkar Tara(1975)	Principles of population Studies, Himalaya Publishing House, Bombay
3	Chandna,R.C. & Manjits. Sidhu(1980)& 1984	Introduction to Population Geography Kalyani Publishers, New Delhi.
5	Garnier, J.B. (1976)	Geography of Population, Longman Group Ltd., London.
5	GeorgeJ.Demlo et.al(1970)	Population Geography: A Reader, McGraw Hill Book Co. New York.
7	Hussein, Majid (1999)	Human Geography (2Ed.), Rawat Publications, Jaipur.
8	John,I.Clarke (1972)	Population Geography Indeed, Pergamum Press, Oxford.
9	Sinha V.C(1979)	Dynamics of India's Population Growth, National Publishing House, New Delhi.
10	Smith,T.L. (1960)	Fundamental of Population Studies, Lippincott, London.
11	Trewartha,G.T.(1959)	A Geography of Population; World patterns, John Wiley & Sons Inc. New York.

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PAPER- 3.3 (b) GEOGRAPHY OF TOURISM AND RECREATION

Objectives: The objective of this course is to understand the nature of man- environment relationship and human capability to adopt and modify the environment under its varied conditions and to understand the impact of tourism on physical and human environments. This course further aims to familiarize tourist spots, places, and its interaction, and to orient the students to the logistics of tourism industry and the role of the tourism in the regional development.

Course Structure:

Unit- I	Basics of Tourism: Definition and concept of tourism- Approaches to study of tourism- Tourism system- Factors affecting of tourism.	10 hours
Unit- II	Evolution of tourism: Early beginning and its growth, Influence of Industrialization and Modernization on changing perception of tourism. Robinson's classification of tourism- Forms and types of tourism: Business, Domestic, National, International, Inter and Intra regional and Holiday's tourism.	10 hours
Unit- III	Structural components and characteristics of Tourism - motivation factors- Tourism as Industry- functions of tourism with reference to developed & developing nations.	10hours
Unit- IV	Impact of tourism: Tourism and environment Influence of tourism on Physical and Socio- Economic conditions- air and water quality, Employment, labour, sectoral linkages and issues of conservation.	10 hours
Unit-V	Tourism Development: Important tourist sites/places in Karnataka and India, Historical perspective of tourism development in Karnataka –Resource potentialities of tourism, Regional policies of tourism and its development, Role of public and private sector in the development of tourism, Impact Tourism on society and environment.	12 hours

REFERENCE:

1	Bhatia.A.K (1991)	Dynamics of Tourism and Recreation, Inter India, New Delhi
2	Bhatia.A.K (1991)	International Tourism, Fundamentals and practices, sterling, New Delhi.
3	Bhatia.A.K (1991)	Tourism Development, Principles and Practices, Sterling, Bangalore.
4	Cosgrove. I & Jackson. R (1972)	The Geography of Recreation and Leasure, Hutchinson, London.
	Garg.N.K.(1996)	Tourism and Economic Development, Avishkar, Jaipur.
5	Hunter. C& Green. H (1995)	Tourism and Environment, A Sustainable Relationship.
	Hudson	Geography of Tourism, Daya publishing House, New Delhi.
6	Kaul.R.K. (1985)	Dynamics of Tourism and Recreation, Inter-India, New Delhi.
7	Tiwari.S.P (1994)	Tourism Dimensions, Atmaram Publisher, New Delhi.
8	Rabinson.H.(1996)	A Geography of Tourism, Macdonald and evans, London.
9	Hagget. P.(1979)	Geography: A Globak Synthesis, Prentice Hall, London.

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PAPER-3.3 (c) RESOURCE GEOGRAPHY

Objectives: The objective of this paper is to provide an overview of resource geography and its interface with environment. The course aims to provide an understanding of the existing reality of resources utilization and environmental depletion, further it aims to sensitize the students to the concept of sustainable resource and sustainable development.

Course Structure:

Unit- I	Definition, Meaning, nature and significance of Resources. Creation of Resources- Use and Misuse of Resources- Impact of Science and Technology on Resource exploitation.	10hours
Unit- II	Classification of Resources: Renewable and non-renewable resources, and its importance. Land and Forest Resources: Importance of forest resources-Types of forest-Deforestation. Maintenance and conservation of forest resources.	10 hours
Unit- III	Atmospheric Resources: Air and air pollution and its effects-Sociological response to air pollution. Water Resources: Use of water resources and its Conservation, Water pollution . Hydrological cycle	10 hours
Unit- IV	Resources development–Resource depletion, degradation and emerging Crisis- Desertification,–Global warming-Increasing water scarcity and conflicts–Energy crisis- Issues of Sharing of resources –Challenges before developed and developing countries.	10 hours
Unit-V	Need for resource conservation - Methods of conservation, Use and Re-use of materials, Types of recycling. -World submits on the conservation of natural resources. Community participation and governance–Sense of individual responsibility, Role of Government in the conservation of natural resources.	12hours

REFERENCE:

1	Allen S.W and Leonard	Conserving Natural Resources
2	Dasmann	Environmental Resources.
3	Finch Trewartha and Sheares	The Earth and its Resources
4	Harper, C.L (2001)	Environment and Society, Human Perspectives on Environmental Issues, Prentice Hall, New Jersey.
5	Herald G.V.V	Conservation of Natural Resources
5	Mather, A.S. and Chapman, K.(1995)	Environmental Resources, Longman Scientific and Technical, London.
6	Negi B.S	Resource Geography
7	Olivers. Owen	Natural Resource Conservation
8	Renner G.G	Conservation of Resources
9	Vadilal Dagli	Natural Resources in Indian Economies.
10	Zimmermann E.W	Introduction to world

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M. Sc IIIrd Semester Geography

Paper 3.4 (A)- REGIONAL GEOGRAPHY OF INDIA

OEC- (Open Elective) (For Competitive Exam)

Objectives: To understand the India in terms of various physical divisions, their important characteristics and intra-regional and inter regional linkages and to analyze natural and human resource endowments and their conservation and management. The study also synthesis the students with development issues and policies and programmes design for regional development.

Course Structure:

Unit- I	Location-size and shape- Administrative divisions - Physiography: Himalayas, plains, Deccan plateau, & coasts. Drainage system: Climate: Seasons, Monsoon and mechanism of monsoons. Soils: types of soils. Natural vegetation and its types.	12 hours
Unit- II	Irrigation, types of Irrigation-Major multi-purpose projects- DVC, Bhakra Nangal, Nagarjunasagar, Tungabhadra. Agriculture- types of crops- Farming methods of Rica, Wheat, Sugarcane, Cotton, Tea, Coffee and its distribution and production..	10 hours
Unit- III	Mineral and power recourses: Classification of Minerals- Methods of mining of Iron Ore, Manganese, Coal, Gold, Petroleum, and Natural gas and its distribution and production. Industries: Industrial regions of India, Distribution and production of sugarcane, Cotton textile, Iron and steel, Chemical, Automobile industries.	12 hours
Unit- IV	Population: Growth, Trend and distribution of population. Density of population, sex ratio and literacy. Settlements and types of settlements-Urbanization in India. Regional disparities and remedial measures to reduce regional imbalances/ disparities.	12 hours
Unit-V	Locating and labeling the given places on the map of India: capitals, towns, cities, Rivers, Mountains, Minerals, Industries Tourist spots, wild life and Airports, and ports.	08 hours

REFERENCE:

1	Chopra S.N	India an area study.
2	Dubey and Negi	Economic Geography of India.
3	Gopal Singh	Geography of India.
4	Khulhar	Regional geography of India.
5	Singh R.L	Regional geography of India.
5	Sharma and Continuo:	Economic and commercial Geography of India.
6	Ranganath	Regional and economic Geography of India (Kan. Ver) Vidyanidhi , Gadag,
8	Mallappa	Geography of India (Kan.Ver)

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M. Sc IIIrd Semester Geography

Paper 3.4 (B)- REGIONAL GEOGRAPHY OF KARNATAKA

(Open Elective) (For Competitive Exam)

Objectives: To understand the Karnataka in terms of various physical divisions , their important characteristics and intra-regional disparities in agriculture, and industries and to analyze natural and human resource endowments and their conservation and management.

Course Structure:

Unit- I	Karnataka: Location and extent, Administrative divisions- Physical divisions-Malanad, Maidan and Costal. Drainage: East flowing and West flowing rivers. Climate-Mechanism of Monsoon, Soil and its types, and Natural Vegetation	10 hours
Unit- II	Water resource and Major River Projects -Tungabhadra, Krishna and Cauvery. River water disputes. Irrigation-types of Irrigation. Method of farming, Agriculture Crops- Rice, Jowar, Cotton, Groundnut, Sugarcane, Coffee cultivation, distribution and Production.	12 hours
Unit- III	Mineral Resources - Iron ore and Manganese, Bauxite. Industries: Iron and Steel, Sugar, cotton and Paper, Software Transport: Road, Railway and Air.	12 hours
Unit- IV	Human Resource: Growth & Trend of population, Density distributional pattern of population. Literacy, sex ratio, Urbanization – Definition, Urbanization in Karnataka, Regional Disparities and remedial measures to reduce regional imbalances.	12 hours
Unit-V	Locating and labeling the given places on the map of Karnataka: Towns Tourist spots, Industries, Major Ports of Karnataka. Knowledge based Industries, Rivers	12 hours

REFERENCE:

1	Karnataka State Gazetteer Department Govt. of Karnataka Bangalore	Karnataka State Gazetteer, Volume- I & II
2	Mallappa. P	Geography of Karnataka (Kannada Version)
3	Misra R.P	Geography of Mysore State
4	NBK Reddy and Murthy G.S	Regional Geography of Mysore State
5	Ranganath	Regional Geography of Karnataka
6	Nanjannavar S. S.	Geography of Karnataka

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RANI CHANNAMMA UNIVERSITY, BELAGAVI

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PAPER- 3.5 QUANTITATIVE TECHINIQUES IN GEOGRAHY

(Practical-I)

Objectives: The aim of this course is to provide some basic statistical procedures and quantitative methods to the students to be applied in to various themes in geography. To provide basic training for understanding these techniques and to apply and interpret the results derived, further the course aims to provide intensive training for in-depth Study of these techniques towards analyzing the geographical problems.

Course Structure:

Unit- I	Significance of quantitative methods in Geography-Population projection, semi average method -Least square method.	10 hours
Unit- II	Lorenz curve, Rank size rule, Nearest Neighbor Technique. Functional classification of town by Webber, Centrographic Analysis and Shape Index, Sphere of Unban influence.	12 hours
Unit-III	Agricultural Efficiency by Kendall's method Index of Concentration by Bhatia. S. S - Gibb's method of Index of diversification- Crop Combination by Weaver, Doi, Rafiullah and Athawale.	12 hours
Unit-IV	Network analysis (Detour Index).Topological properties of graphs, (by Garrison) Connectivity matrix of the graph. Alpha Index, Beta Index, and Gama Index, Breaking point theory.	12hours
Unit-V	Application of quantitative Methods in the Geographical Research.	06 hours

REFERENCE:

1	Aslam Mahmood (1977)	Statistical methods in geographical studies Rajesh Pub. New Delhi.
2	Gregory s. (1963)	Statistical methods and the Geographer, Longman's London.
3	Hammond R.& Mc Cullagh P.(1974)	Quantitative Techniques in Geography Clarendon Press, Oxford.
4	Haring, Lloyed (1975)	Scientific Geographic Research W. C. Brow Company, U.S.A.
5	Hagget peter (1990)	Geography a modern synthesis. Harper International, New York.
5	Kothari, C.R.(1996)	Research methodology. Vishwas Prakashan, New Delhi.
6	Mishra, R.P.(1991)	Research methodology in Geography. Concept Publishing, New Delhi.

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RANI CHANNAMMA UNIVERSITY, BELAGAVI

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CBCS (Choice Based Credit System)

PAPER: 3.6 - STUDY OF AERIAL PHOTOGRAPHS & SATELLITE IMAGERIES (Practical-II)

Objectives: The main objective of the course is to introduce to the students that the basic principles of GIS. To introduce the students that GIS is a tool of spatial science and art of representing various types of data with aid of GIS technology. The course further aimed at introducing the basic elements of GIS, methodology and its application in the study of geography.

Course Structure:

Unit- I	Introduction to Aerial Photographs, Early history, method of taking photographs and Types of Aerial Photographs, Difference between aerial photo, satellite imageries and Maps.	10 hours
Unit- II	Determination of Scale of Aerial Photographs, Geometry of Aerial Photographs and scale of a vertical photographs	12 hours
Unit- III	Elements of Aerial Photo Interpretation, Pair of photographs, Use of Pocket Stereoscope, Mirror Stereoscope, Sketch Master Parallax bar and its advantages and disadvantages and 3-D view	12 hours
Unit- IV	Interpretation of Vertical Aerial Photographs with reference to land use, settlement pattern, drainage pattern and natural vegetation	10 hours
UNIT-V	Remote Sensing: meaning, Remote Sensing Satellites, Comparison of aerial photographs and satellite imageries and Interpretation of satellite imageries (Visuals)	08 hours

REFERENCE:

1	Chrisman N.R. (1997)	Remote sensing and Geographical Information Systems
2	Colwell, R. N. ed. (1960)	Manual of Photographic Interpretation, Falls Church, Va: American Society of Photogrammetry
3	Kang-tsung Chang (2008)	Introduction to Geographic Information Systems Tata McGraw Hill
4	Lillesand, T. M. & R. W. Kiefer (1979)	Remote Sensing and Image Interpretations John Willey& Sons Inc, New York
5	K. Kumarswamy	Remote Sensing for Environmental Studies
6	Poul. R. Wolf (1985)	Elements of Photogrammetry,Mc. Graw Hill, International Book Company, New York
7	Roscoe, J. H. (1960)	Photo Interpretation in Geography, In Manual of Photographic Interpretation, edited by R. N. Colwell, Falls Church, Va: American Society of Photogrammetry
8	Sabbins.F.F (1987)	Remote sensing: principles and Interpretations", W. H. Freeman and Co, New York
9	Thomas Eugene Avery & Graydon Lennis Berlin	Fundamentals of Remote Sensing and Airphoto Interpretation Vth Edition, Macmillan Publishing Company, New York

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paper No	Subject Title	Theory/ Practical Hour/ Week	Core	Credits	Duration of Exam Hours	Max. of Marks	IA Marks	Total
	Theory paper:							
4.1	**Regional Planning and Development**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
4.2	**Settlement Geography**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
4.3	**Research Methodology in Geography**	**4**	**Core**	**4**	**3**	**80**	**20**	**100**
4.4	**Optional Papers: Choice any one:** **a) Geography of India.** **b) Urban Planning and Development** **c) Rural Landuse Planning**	**4** **4** **4**	**Core** **Core** **Core**	**4** **4** **4**	**3** **3** **3**	**80** **80** **80**	**20** **20** **20**	**100** **100** **100**
	Practical paper:							
4.5	***Practical-I*** ***Conventional and GPS Surveying***	**4**	**Core**	**4**	**4**	**80**	**20**	**100**
4.6	***Practical- II*** ***Project/Field Work/ Dissertation***	**4**	**Core**	**4**	**4**	**80**	**20**	**100**

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PAPER-4.1 REGIONAL PLANNING AND DEVELOPMENT

Objectives: To understand and evaluate the concept of region in geography and its role and relevance in regional planning, to identify the issues relating to the development of the region through the process of spatial organization of various attributes and their interrelationships. The course also aims to identify the causes of regional disparities and to suggest the measures for the development of the region.

Course Structure:

Unit- I	Concept of Region- types and hierarchy of regions - concept of planning-types of planning - approaches to Regional planning. Indicators of development. Measures of regional development.	10 hours
Unit- II	Basic issues in Regional planning-Gross root level and systems to regional Planning, Regional interactions and economic development.	08 hours
Unit- III	Development Strategy and planning for Natural, Social and economically background regions. Tribal area development planning.	10 hours
Unit- IV	Growth pole concept-Growth pole theory and regional planning. Planning processes – Sectoral, Temporal, and spatial, Multi-level Planning-Block and District level Planning, decentralized planning and Integrated Area Development Planning.	12 hours
Unit-V	Role of urban centers in regional development – Urban scenario in Karnataka in the context of regional development – City regions and their problems. Regional Disparities-Planning Regions in Karnataka-Policies and Programmes for backward area development.	12 hours

REFERENCE:

1	Ashish sarakar(2011)	Regional planning in India.
2	Dickinson R.E.(1964)	City and Region; A Geographical Interpretation Routledge and Keagan Paul.
3	Galasson John (1974)	An Introduction to Regional Planning Hutchinson Educational London.
4	Sundaram, K. V. (1985]	Geography and Planning", Concept Publishing Company, New Delhi
5	Misra R.P. Sundaram K.V.& V.L. S. Prakasa Rao(1974)	Regional Development Planning In India.
5	Misra R.P. (1992)	Regional planning, Concept Publishing company, New Delhi.
6	Mahesh Chand & Vinaykumar Puri(1983)	Regional Planning in India, Allied publishers Ltd., New Delhi.
7	Whynnes Charles & Hammand (1979)	Element of Human Geography, George Aflen & Unwin, London.
8	Bhat L. S.	Aspects of Regional Planning in India.

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M. Sc IIIrd Semester Geography

PAPER-4.2 SETTLEMENT GEOGRAPHY

Objectives: The aim is to acquaint the student with spatial and structural characteristics of Human settlement under varied environmental conditions, to enable them to diagnose spatial issues related to urban and rural settlements. The course also enable students to equip themselves for concerns in various agencies linked with the socio- economic wellbeing of human communities and planning of human settlements

Course Structure:

Unit- I	Definition, Nature and scope of settlement of geography. Origin and growth of Rural and urban settlements. Rural as opposed to urban. Characteristics of rural settlements. Human settlements as functional system.	08 hours
Unit- II	Pattern and types of rural Settlements. Concept of Rural-Urban continuum. Rural settlements as a service and market Centre. Chaining socio-economic structure of rural settlements, rural de-population. Rural planning and integrated development in India.	10 hours
Unit- III	Evolution of Towns with regard to site and situation - Urbanization, Trend of urbanization, Urban influence, Urban Fringe, Urban Sprawl and urban renewal. Size and spacing of urban settlements, Urban hierarchy, and Rank size rule and primate city.	12 hours
Unit- IV	The economic base of urban centers & classification on the basis of size & function. Central Business District (CBD) its Characteristics. Central Place theory by W. Christaller - Urban functions - Functional classification of towns- Webb's, Nelson. H. J. Harris. C. D.	12 hours
Unit-V	Urban land use theories- i) Concentric Zone Model by E.W. Burgess, ii) Sector Model by Homer Hoyt.iii) Multiple Nuclei Model by Harris and Ullman. Urban poverty, Slums : its characteristics, clearance, planning. Master plan of towns, New towns.	10 hours

REFERENCE:

1	Alexander J.W.(1991)	Economic Geography. Prentice Hall of India. New Delhi.
2	Carter H.(1975)	The study of urban geography. Edward Arnold, London.
3	David Peter & Hopkinson M.(1983)	The geography of settlements, Oliver & Boyot, Edinburph
4	Haggett Peter (1991)	Geography a modern synthesis, Harper & Row, New York.
5	Johnston J.H.(1974)	Urban Geography, Pergoman Press, Oxford.
5	Johnston R,.J.(1984)	City & Society. Unwin hyman, London.
6	King L.J.& Golledge R.G.(1978)	Cities, space & Behavior, Prentice Hall, engle wood cliff, New Jersey.
7	Mandal R.B.(2000)	Urban Geography, Concept Publishing Co. Delhi.
8	Mayer H. M. & Cohen [1967)	Readings in Urban Geography, Central Book depot. Allahabad.
9	Northam ray M.(1975)	Urban Geography, John Willey & Sons, New York.
10	Ramachandran R.(1991)	Urbanization and Urban Systems in India,.new Delhi.
11	Robinson,Brian T(1973	Urban growth, Mathuen & Company, London.
12	Sidhartha K.& Mukherjee. S.(2000):	Cities-Urbanizations & Urban Systems. Kisalaya pub. Pvt.Ltd.,New Delhi.
13	Yeates & Garner (1971)	Readings in Urban Geography. The North American City. Harper & Row. New York.

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CBCS (Choice Based Credit System)

M. Sc IVth Semester Geography

PAPER-4.3 - RESEARCH METHODOLOHY IN GEOGRAPHY

Objectives: The aim of this course is to provide some basic scientific procedures of research to select the research problem, using tool and methods in research, to provide more exposure of understanding statistical and quantitative methods. Further the course aims to provide intensive training for understanding formulation of research problem, organization of the work done and finalizing the work selected etc .The students will study this course with adequate information and skills required.

Course Structure:

Unit- I	Research Methodology: Meaning Need and purpose, Scientific Approaches to geographical research: Type of research- Traditional and scientific,	08 hrs
Unit- II	Logic of Research: Hypothesis, concepts, facts, laws, theories and their importance in geographical research- Importance of deductive and inductive reasoning, scientific method and theory building.	10 hrs
Unit- III	Tools and Techniques of Research: Selection of the problem. Observation, Perception, Interview, Questionnaire, Schedule and check list- sources of data – primary and secondary, use of sampling techniques- use of SPSS software in data analysis.	12 hrs
Unit- IV	Research tool and Research Design: Formulation of a research proposal- Identification and defining the problem, objective and scope of Research, and preparing bibliography in a scientific manner- Proficiency in field methods- proficiency in the use of maps and Photographs- proficiency in the use of statistical data analysis and Quantification.	12 hrs
Unit-V	Writing of report- significance of report writing- Chapter wise Organization of the thesis, the text of the reference material- Drafting of the thesis – First, Second and final draft. Summery and Conclusion of the work.	10 hrs

REFERENCE:

1	Anderson, J. Durston, B.H. & Poole, M, (1970)	Thesis and Assignment Writing, Wiley Eastern Ltd, New Delhi
2	Cooray, P.G (1992)	Guide to Scientific and Technical Writing, Handagala, Srilanka
3	Davis J.C. (1986)	Statistics and data Analysis, John Wiley and Sons NY.
4	Fitz Gerald, B.P. ed (1974	Science in Geography, Series 1, 2, 3, 4, 5, 6. Oxford University press, London
5	Hang, L.L. and Lounsbury, J.F. (1971)	Research Methods in Geography, Brown company Publishers, Iowa
5	Kothari, C. R.(1990)	Research methodology, methods and Techniques Vishwa Prakashan, New Delhi.
6	Mishra, R.P.(1991)	Research methodology in Geography. Concept Publishing, New Delhi.

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P. G. Department of Studies in Geography

CBCS (Choice Based Credit System)

M. Sc IIIrd Semester Geography

Paper 4.4 (a) - GEOGRAPHY OF INDIA (Optional)

Objectives: To understand the India in terms of various physical divisions, their important characteristics and intra-regional and inter regional linkages and to analyze natural and human resource endowments and their conservation and management. The study also synthesis the students with development issues and policies and programmes design for regional development.

Course Structure:

Unit- I	Location-size and shape- Administrative divisions - Physiography: Himalayas, plains, Deccan plateau, & coasts. Drainage system: Climate: Seasons, Monsoon and mechanism of monsoons. Soils: types of soils. Natural vegetation and its types.	12 Hrs
Unit- II	Irrigation, types of Irrigation-Major multi-purpose projects-DVC, Bhakra Nangal, Nagarjunasagar, Tungabhadra. Agriculture: types of crops- Farming methods. Cultivation, distribution and production of Rice, Wheat, Pulses, Sugarcane, Cotton, Tea,Coffee.	10 Hrs
Unit- III	Mineral and power resources: Classification of Minerals-Methods of mining of Iron Ore, Manganese, Coal, Mica, Petroleum, and Natural gas and its distribution and production. Industries: Industrial regions of India, Distribution and production of sugarcane, Cotton textile, Iron and steel, Chemical, Automobile industries.	12 Hrs
Unit- IV	Population: Growth, Trend and distribution of population. Density of population, sex ratio and literacy. Settlements and types of settlements-Urbanization in India. Regional disparities and remedial measures to reduce regional imbalances/ disparities.	12 Hrs
Unit-V	Locating and labeling the given places on the map of India: capitals, towns, cities, Rivers, Mountains, Minerals, Industries Tourist spots, wild life and Airports, and ports.	08 Hrs

REFERENCE:

1	Chopra S.N	India an area study.
2	Dubey and Negi	Economic Geography of India.
3	Gopal Singh	Geography of India.
4	Khulhar	Regional geography of India.
5	Singh R.L	Regional geography of India.
5	Sharma and Continuo:	Economic and commercial Geography of India.
6	Ranganath	Regional and economic Geography of India (KanVer)Vidyanidhi , Gadag,
8	Mallappa	Geography of India (Kan.Ver)
9.	Nanjannaver S.S	Geography of India.

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CBCS(Choice Based Credit System)

M. Sc IVth Semester Geography

PAPER-4.4- (b) URBAN PLANNING AND DEVELOPMENT (Optional)

Objectives: The objective of this paper is to provide an overview of urban planning India. The aim is to acquaint the student with spatial and structural characteristics of Human settlement under varied environmental conditions, to enable them to diagnose spatial issues related to planning of urban and rural settlements.

Course Structure:

Unit- I	Urban planning: Definition**,** meaning, Objectives of town planning. Economic justification of town planning. Site for ideal town and its Requirements, town & its characteristics. planning for modern town. Significance of urban planning.	06 hours
Unit- II	Urban planning-Evolution of planning- Principles and practices-History of Urban planning in India –Ancient, Medieval and Modern. Master plan for large cities-its need purpose and scope.	12hours
Unit-III	Planning for Built-up area: Planning for housing, Industries and Commerce. Urban growth models & theories of urban land use and its utility. Master Plan a case study Belgaum city.	12hours
Unit-IV	Definition of Slum-Census of slums-Slum clearance and its Programmes, planning for Prevention of slum formation, Effects of slums, and slum clearance.	10 hours
Unit-V	Urban planning in India- policies issues problems involved-Urban land values, problems & prospects. Urban landuse survey. Use of GIS Technique in urban planning.	12 hours

REFERENCE:

1	Alexander J.W.(1991)	Economic Geography. Prentice Hall of India. Delhi.
2	Claire	Hand Book on Urban planning.
3	Carter H.(1975)	The study of urban geography. E. Arnold, London.
4	David Peter & Hopkinson M.(1983)	The geography of settlements, Oliver & Boyot, Ed.
5	Haggett Peter (1991)	Geography a modern synthesis Harper & Row N Y
5	Johnston J.H.(1974)	Urban Geography, Pergoman Press, Oxford.
6	Johnston R,.J.(1984)	City & Society. Unwin hyman, London.
7	King L.J.& Golledge R.G.(1978)	Cities, space & Behavior, Prentice Hall, Engle wood cliff, New Jersey.
8	Mandal R.B.(2000)	Urban Geography, Concept Publishing Co. Delhi.
9	Northam ray M.(1975)	Urban Geography, John Willey & Sons, New York.
10	Rangwala.S.C	Town Planning, Charotar publishing house, India
11	Ramachandran R.(1991)	Urbanization and Urban Systems in India, Delhi.
12	Robinson,Brian T(1973	Urban growth, Mathuen & Company, London.
13	Sundaram K.V	Urban and Regional planning in India.

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M. Sc IVth Semester Geography

PAPER-4.4-(c) RURAL LANDUSE PLANNING (Optional)

Objectives: The aim of the course is to introduce the students about the concept, principles of landuse, and land use planning, and its overuse and misuse of soil in recent years have resulted in degradation of soil. The course further aims to familiarize the students with the application of various landuse theories, models, land capability classifications and agricultural landuse problems and planning policies at macro, meso and micro levels.

Course Structure:

Unit- I	Definition, meaning and principles of land use planning. Factors influencing agricultural land use .significance of land use studies. Agricultural land use and its problems.	10 hours
Unit- II	Land resource-Function of land-Land use and land cover-land cover damage-Issues related land use change. Aims and objectives of landuse planning, efficiency, equity and acceptability, sustainability.	10 hours
Unit- III	Soil profile-O- horizon, A- horizon, B- Horizon, C- horizon, E- Horizon and R- horizon. Soil forming factors-parent materials, organic, topographic & spatio-temporal dimensions.	10 hours
Unit- IV	Planning of soil, Soil conservation and management in rural areas. Agricultural land use and land capability classifications. Methods of land capability.	10 hours
Unit-V	Agricultural land use problems and planning. Difference between rural and urban land use planning. Principles of land use planning of Macro, Meso and Micro levels.	12 hours

REFERENCE:

1	Ali Mohamad	Studies in Agricultural Geography.
2	M. Shafi,(2006)	Agricultural Geography" Dorling Kindersly (India) pvt, Ltd. Licensees of Pearson Education in South Asia. New Delhi.
3	Majid Hssain, (2002)	Systematic Agricultural Geography" Rawat Publication, Jaipur.
4	Noor Mohammed	Perspectives in Agricultural Geography, Vol. I to II, concept publishing company, New Delhi.
5	Sing and Dhillon, (2000)	Agricultural Geography", Tata Mcgrow – Hill Publishing company ltd, New Delhi.
5	Jasbir Sing,	Agricultural Geography.
6	Stamp. L. D	The Land of Britain-it purpose and scope.
7	Shafi. M(1969)	Landuse planning, Classification and capability Geographers, Vol-XVI, 1969.

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M. Sc IVth Semester Geography

PAPER – 4.5 CONVENTIONAL AND GPS SURVEYING

(Practical - I)

Objectives: The objective of this course is to introduce to the students about some basic information and concepts of survey and its various methods. Further this course aims to train the students to handle these survey instruments and to understand techniques towards measuring analyzing the area.

Course Structure:

Unit- I	Definition, Meaning and Purpose of Surveying-Types of surveying: Advantages of surveying- Use of conventional and GPS survey.	10 hours
Unit- II	Plane Table survey: working principles of the instrument. Methods: Method of Resection and Intersection survey.	10 hours
Unit- III	Dumpy Level survey: working principle of the dumpy level- Methods: Simple and differential leveling, Interpolation method. Prismatic Compass: working principles of the prismatic compass. Method of plotting closed method and Open Traverse method.	12 hours
Unit- IV	Theodolite Survey: working principles of the Instrument - Methods: Measurement of Vertical objects/angles and measurement of Horizontal angles.	10 hours
Unit-V	GPS Survey (Global Positioning System): Introduction, Functions, Space segment, control segment, user segment. Uses of GPS Technology-Location, Navigation, Tracking, Mapping and Timing. Calculation of distance, Survey with GPS.	10 hours

REFERENCE:

1	Gopal Singh	Map Work and Practical Geography**,** 3rd edition, Vikas Publishing House New Delhi,
2	Gupta K.K and Tyagi V.C	Working with maps Survey of India Department of Science and Technology, Govt. of India, Dehra Dun 1992.
3	Mishra R.P	Fundamentals of Cartography1969, Prasaranga, University of Mysore, Mysore.
4	Punmia P.C	Surveying, Laxmi publication, New Delhi, 2005.
5	Rampal	Surveying, Mittal Publication, Merat, 2002
5	Singh. R.L	Elements of Practical Geography Kalyani Publishers, New Delhi, 1979.

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M. Sc IVth Semester Geography

PAPER-4.6 FIED WORK AND DISSERTATION (Practical - II)

Objectives: The objectives of this course are to understand the spatial and structural dimensions of population and emerging issues. The course is further aimed at familiarizing the students with global and regional level problems and also equips them for comprehending the Indian situation.

Course Structure:

Unit- I	Methods of field investigation and its importance in Geography.	05 hours
Unit- II	Field work of different areas and area levels (micro-meso-macro).	05 hours
Unit- III	Method of Collection of field data, Sampling methods and Preparation of Questionnaires and its importance.	20 hours
Unit- IV	Data input, processing, representation, analysis and interpretation. (using computer and GIS techniques) Report writing.	20 hours

Note: 1.Study tour and dissertation work is compulsory for the duration of **ten days**. The submission of final dissertation work(book form) to the department by the student before the commencement of final exam.

2. The concerned staff member can suggest a topic only at village/ block/taluka and district level with intensive field work for the preparation of dissertation report.

SCHEME OF EVALUATION:

a) Internal Test :20 – Marks
b) Preparation of dissertation: 30 – Marks
c) Viva- voce: 50 - Marks.

Total Marks:100 Marks

REFERENCE:

1	Anderson, J. Durston, B.H. & Poole, M, (1970)	Thesis and Assignment Writing, Wiley Eastern Ltd, New Delhi
2	Cooray, P.G (1992)	Guide to Scientific and Technical Writing, Handagala, Srilanka
3	Davis J.C. (1986)	Statistics and data Analysis, John Wiley and Sons NY.
4	Fitz Gerald, B.P. ed (1974	Science in Geography, Series 1, 2, 3, 4, 5, 6. Oxford University press, London
5	Hang, L.L. and Lounsbury, J.F. (1971)	Research Methods in Geography, Brown company Publishers, Iowa
5	Kothari, C. R.(1990)	Research methodology, methods and Techniques Vishwa Prakashan, New Delhi.
6	Mishra, R.P.(1991)	Research methodology in Geography. Concept Publishing, New Delhi.

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Note: ***FOR FIED WORK AND DISSERTATION*** **:**

- *In the VI semester, there will be compulsory practical paper i.e.* ***Field Work/Project/ Dissertation*** *and concerned teacher has to select study area (Village/Block/Taluka/City level) for the preparation of final dissertation report in consultation and approval with the concerned Chairman of the Department of the university.*

  The field work/project/dissertation carries ***80 marks****, of which* ***30 marks*** *are allotted to preparation of the dissertation and examiner has to decide/fix the marks based on the merits of the dissertation. The remaining* ***50 marks*** *are kept for* ***viva-voce*** *of the candidates.*

METHOD OF ALLOTMENT OF MARKS FOR PROJECT REPORT / VIVA-VOCE

Exam Seat No.	Submission of Project/ field work preparation (30)	Selection of the problem/ Topic (05)	Data Base (10)	Methodology (10)	Objectives (10)	Presentation of Findings/ results (15)	**Total Marks (80)**
For Example							
X	27	3	6	6	7	8	55
Y	25	3	5	5	5	6	49
Z	18	2	4	4	3	4	35

RANI CHANNAMMA UNIVERSITY, BELAGAVI

P. G. Department of Studies in Geography

M.Sc – I/II/III/IV- Semester Geography (CBCS)

Paper - _____

Time : 3 Hours
Max. Marks : 80

Instructions : 1. Attempt all sections
2. Wherever necessary draw diagrams and maps.

SECTION-A **(2 x 5 = 10 marks)**

Note : 1) Answer **any five** questions.
2) Answer should **not** exceed **50** words
3) **Each** question carries **two** marks.

1.
2.
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6.

SECTION-B **(10 x 4 = 40 marks)**

Note : 1) Answer **any four** questions.
2) Answer should **not** exceed **500** words
3) **Each** question carries **ten** marks.

7.
8.
9.
10.
11.
12.

SECTION-C **(15 x 2 = 30 marks)**

Note : 1) Answer **any two** questions.
2) Answer should **not** exceed **1000** words
3) **Each** question carries **fifteen** marks.

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16.

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