

CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME BY SEMESTERS
Department of Geography, Bangalore University, Bangalore
GEOGRAPHY
UNDER GRADUATE DEGREE PROGRAMME
For students admitted in 2014-15

Regulations and syllabus in Geography for B.A./B.Sc. Semester Scheme

- I (i) To be eligible to take “GEOGRAPHY” as one of the optional subjects of U.G. level, a student must complete pre university course or equivalent course.**

Scheme of Instruction

- 1 (i) The subject ‘GEOGRAPHY’ for this scheme has to be taught by a Master’s Degree holder in geography only.**
 - 2**
- II (i) Geography at under graduate level consists of six semesters with eight theory papers and eight practical papers.**
- (ii) Theory paper-consists of 100 marks (70 Theory +30 internal assessment)
Practical paper consists of 50 marks (35+ 15)
In the I, II, III, and IV semesters there will be one theory paper and one practical Paper each. In V and VI semesters there will be two theory papers and two practical papers each.**
- (iii) Each theory paper will have a minimum of 50 hours of teaching and each practical Paper will have a minimum of 30 hours of teaching in each semester course.**
- (iv) The duration of each semester being 18 weeks excluding Examination period.**
- III (i) Practical’s are to be conducted in batches each batch consists of 10 students with One teacher or between 11 to 20 students with two teachers. In case, if the student Number is below 10 is also considered as one batch with one teacher.**
- (ii) Each batch (Depends on the number of students) must be supervised by one or two Teachers covering instructions supervision of practicals and correction of records.**
- (iii) Attendance: in each semester 75 % of attendance is compulsory**

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Sl. No.	Paper Code	Title of the Paper	Type of the Paper	Hours/Week	Duration of Exam (Hours)	IA	Exam	Total Marks	Credits
I Semester									
1		Physical Geography, Part – I Landforms	HC	4	3	30	70	100	2
2		Practical Paper –I Cartography (Maps, Scales & Graphs)	HC	3	3	15	35	50	1
II Semester									
1		Physical Geography, Part – II Atmosphere and Hydrosphere	HC	4	3	30	70	100	2
2		Practical Paper –II Weather Instruments and study of Indian Daily Weather Reports	HC	3	3	15	35	50	1
III Semester									
1		Human Geography	HC	4	3	30	70	100	2
2		Practical Paper – III Representation of Statistical Data	HC	3	3	15	35	50	1
IV Semester									
1		Regional Geography of Karnataka	HC	4	3	30	70	100	2
2		Practical Paper – IV Map Analysis	HC	3	3	15	35	50	1
V Semester									
1		Regional Geography of India, Part -I	HC	4	3	30	70	100	2
2		Practical Paper – V Map projections – I	HC	3	3	15	35	50	1
3		Practical Paper – VI Basic Statistics	HC	3	3	15	35	50	1
4		Environmental Geography	SC	4	3	30	70	100	2
5		Settlement Geography	SC	4	3	30	70	100	2
VI Semester									
1		Regional Geography of India, Part -II	HC	4	3	30	70	100	2
2		Practical Paper – VI Map projections – II	HC	3	3	15	35	50	1
3		Practical Paper – VII Fundamentals of GIS and Remote Sensing	HC	3	3	15	35	50	1
4		Economic Geography of the World	SC	4	3	30	70	100	2
5		Population Geography	SC	4	3	30	70	100	2

Note: All the Hard Core Courses are compulsory. Students can choose any one Soft Core Course between two Soft Cores in each semester.

SCHEME OF EXAMINATION

1. THEORY EXAMINATION

- (i) Each theory paper carries a maximum of 100 marks (70+30) and is of 4 hours duration.**
- (ii) Each theory paper consists minimum of 5 units and subunits.
Candidates have to answer any 5 and each question carries 2 marks, answer should not exceed more than 50 words.
Candidates will have to answer any 4 questions each carries 5 marks, answer should not exceed 200 words.
Candidates have to answer any 4 and each question carries 10 marks, answer should not exceed more than 500 words.
Questions for all three sections have to be set from the complete syllabus prescribed for the semester CBCS Scheme.**

II. PRACTICAL EXAMINATION

- (i) Each practical examination is of 3 hours duration with a maximum of 50 marks/ consisting of 35 marks for examination exercises and 15 marks for the practical record and internal assessment. Submission of practical records is compulsory.**
- (ii) The practical examination is to be conducted in batches, with not more than 10 candidates per batch.**
- (iii) There will be one internal examiner and one external examiner to conduct the practical examination for each batch.**
- (iv) Simple calculators can be allowed in the examination hall.**
- (v) (a) Semester I, II, III and IV practical examinations, there will be 4 questions and all are compulsory.
(b) Semester V and VI practical examination there will be 3 questions and all are compulsory.**

III. Minimum to pass in each paper, both theory and practical is 35 %.

IV. Each theory paper shall carry 30 marks for internal assessment and each practical Paper will carry 15 marks for internal assessment marks. (Tests, Assignment and Attendance)

**SEMESTER AND TITLES OF THE PAPERS
CHOICE BASED CREDIT SYSTEM (CBCS)**

I Semester		
1		Physical Geography, Part – I Landforms
2		Practical Paper –I Cartography (Maps, Scales & Graphs)
II Semester		
1		Physical Geography, Part – II Atmosphere and Hydrosphere
2		Practical Paper –II Weather Instruments and study of Indian Daily Weather Reports
III Semester		
1		Human Geography
2		Practical Paper – III Representation of Statistical Data
IV Semester		
1		Regional Geography of Karnataka
2		Practical Paper – IV Map Analysis
V Semester		
1		Regional Geography of India, Part -I
2		Practical Paper – V Map projections – I
3		Practical Paper – VI Basic Statistics
4		Environmental Geography
5		Settlement Geography
VI Semester		
1		Regional Geography of India, Part -II
2		Practical Paper – VI Map projections – II
3		Practical Paper – VII Fundamentals of GIS and Remote Sensing
4		Economic Geography of the World
5		Population Geography

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Semester – I

Paper: Physical Geography, Part – I: Landforms (Hard Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit	No. of periods
I	Introduction	1. Meaning and scope of Physical Geography	12
		2. Solar System, Eclipse	
		3. Origin of the Earth (Nebular Theory, Tidal Theory & Big Bang Theory)	
		4. Latitudes and Longitudes, International Date line	
II	Lithosphere	1. Wager's theory of Continental drift, Plate tectonic	10
		2. Rocks and its types	
		3. Weathering	
III	Diastrophic movement	1. Folds and faults	10
		2. Earthquakes and Volcanoes	
IV	Major landforms	1. Mountains, Plateaus and plains	10
V	Denudation	1. Rivers, Wind, Glaciers and Underground water	10

References:

1. Dasagupta and Kapoor. Principles of Physical Geography, S.Chand and Co. New Delhi. 2001
2. Enayat Ahmed Physical Geography, Kalyani publishers, Ludhiana 1982
3. Strahler, A.N.: Physical Geography, John Wiley, New York 2013
4. Savindra Singh, Physical Geography, Prayag, Pustak Bhavan, Allahabad-1998
5. Mallappa P. Physical Geography, (Kannada Version) Chethana Book House, Mysore 2000
6. Ranganath: Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2003
7. Tikka, R.N. :Physical Geography, Kedarnath Ramnath and co Meerut 1997.
8. Gouder M.B. physical geography(Kannada) Vidyanidhi prakshan Gadag2002.

SEMESTER – I

Practical Paper – I: Cartography (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Maps	1.	Definitions, types of maps and its importance	10
II	Scales	1.	Meaning, Types of scales – statement, graphical, and Representative Fraction (RF)	10
		2.	Conversion of scales	
III	Graphs	1.	Line Graph – Single and Double	10
		2.	Bar Graph – Single and Double	
		3.	Compound Graph	

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

Semester – II

Paper: Physical Geography, Part – II: Atmosphere and Hydrosphere (Hard Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Origin, Structure and composition of atmosphere	10
		2	Elements of weather and climate	
II	Insolation and Pressure	1	Heat Budget	10
		2	Factors controlling the atmospheric temperature	
		3	Horizontal and vertical distribution of temperature	
		4	Global pressure belts	
III	Atmospheric Circulation	1	Types of Winds – Planetary, Seasonal, Local and variable winds (Cyclone and anti-cyclone)	12
		2	Humidity – Absolute, Relative and Specific	
		3	Forms of Condensation and Precipitation	
IV	Hydrosphere	1	Relief features of Ocean floor	10
		2	Continental shelf, slopes and deeps	
V	Movement of Ocean Water	1	Factors affecting the distribution of Temperature, Salinity and density of Ocean water	10
		2	Ocean Currents – Atlantic, Pacific and Indian	
		3	Ocean tides and Coral reefs	

References:

1. Dasagupta and Kapoor. Principles of Physical Geography, S.Chand and Co. New Delhi. 2001
2. Enayat Ahmed Physical Geography, Kalyani publishers, Ludhiana 1982
3. Strahler, A.N.: Physical Geography, John Wiley, New York 2013
4. Savindra Singh, Physical Geography, Prayag, Pustak Bhavan, Allahabad-1998
5. Mallappa P. Physical Geography, (Kannada Version) Chethana Book House, Mysore 2000
6. Ranganath: Principles of Physical Geography, (Kannada Version), Vidhyanidi Gadag, 2003
7. Tikka, R.N. :Physical Geography, Kedarnath Ramnath and co Meeraut 1997.
8. Gouder M.B. physical geography(Kannada) Vidyanidhi prakshan Gadag 2002.

SEMESTER – II

Practical Paper – II: Weather Instruments and study of Indian Daily Weather Reports (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Weather Instruments	1	Working Principles of Weather Instruments – Fahrenheit, Centigrade, Maximum and Minimum Thermometer	10
		2	Barometer – Mercury and Aneroid barometers, Wet and Dry bulb thermometer	
		3	Rain gauge, Wind vane and Cup anemometer	
II	Weather Report	1	Weather symbols	10
		2	Relevance of the study of Indian Daily weather report	
III	Interpretation of Weather maps	1	I.M.D daily Weather charts – Interpretation	10
		2	Interpretation of seasonal weather reports	

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

Semester – III

Paper: Human Geography (Hard Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Definition, Field, scope and Importance	12
		2	Development of Human Geography, Environmental determinism and Possibilism	
		3	Alexander von Humboldt, Carl Ritter, Friedrich Ratzel, Vidal de La Blach, Al Masoodi, Al Idrisis	
II	Races of Mankind	1	Classification and Distribution	12
		2	Man and Environmental relationship	
III	Population	1	Factors affecting the distribution of population in the world.	8
		2	Population regions-growth of population in the world	
IV	Human Migration	1	Nature, causes, types and consequences	10
		2	Internal and International migration	
V	Human Settlements	1	Origin, growth and distributional pattern	10
		2	Types – Rural and Urban settlements	
		3	Functions and characteristics	

References:

1. Principles of Human Geography-Huntington, New Delhi Revised Edition ,1987.
2. Human Geography-Hussain M.,Rawat Publications Jaipur,2003.
3. Human Geography- Nellson,Gabler & Vining,New York,1995.
4. Man and his habitation-Singh R.L.,Rawath Publication,1987.
5. Principles of Human Geography-Vidal-de-la-Blache.,Charlies.E.Merill Publishing Company,1992.
6. Human Geography-Majid Hussain.,New Delhi,1998.
7. Geography of Man’s Environment-Strahler A.H. & Strahler A.N.,Macmillan Publishing Company,1992.
8. Introduction to human geography –Dickens and Pitts.New York,1963.
9. Human Geography (Kannada)-Ranganath and Mallappa.,Gadagh,1999.

SEMESTER – III

Practical Paper – III: Representation of Statistical Data (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Cartographic Symbols	1	Types and their uses of Cartographic symbols	10
		2	Point symbols, dots, circle, spheres, cubes and block pile	
II	Distributional maps-	1	Isopleths, Choropleth, Pyramid, traffic flow lines, Pyramids	10
		2	Pie diagrams	
III	Graphs	1	Hythergraph, climograph and Ergograph	10

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

Semester – IV

Paper: Regional Geography of Karnataka (Hard Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Location and Extend, Relief features, climate.	10
		2	Soil – Types and classification, soil profile	
		3	Forest resources – Types and wildlife sanctuaries	
II	Irrigation	1	Types, Major River Valley Projects – Tungabhadra, Krishna and KRS	12
		2	Agriculture - Important Food crops – ragi, paddy and jowar, Commercial crops- Cotton and Sugarcane and Plantation crops- Coffee	
III	Mineral and Power Resources	1	Iron ore	10
		2	Manganese	
		3	Gold and Copper	
IV	Industries and Transportation	1	Growth and Development of Industries - Sugar cane, Iron and steel, silk, cement	10
		2	Patterns of Roadways, Railways, Airways and waterways.	
		3	Major ports and harbours	
V	Population and Urbanization	1	Growth, density and distribution of population	10
		2	Major Urban centres – Bangalore, Mysore, Hubli, Dharwad and Mangalore	

References:

1. Geography of Mysore-R.P.Mishra, National Book Trust, New Delhi,1996.
2. Regional Geography of Karnataka-N.B.K.Reddy and Murthy,New Delhi,2000.
3. Geography of Karnataka-Mallappa & Nanjannavar S.S.,Vidhyinidi Prakashan Station Road,Gadag,2001.
4. Planning Regions of Karnataka-Achyuthi Rao T.N.New Delhi,1992.
5. Economic Survey of Karnataka-Annual publication by Govt. of Karnataka,2001.

SEMESTER – IV

Practical Paper – IV: Map Analysis (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Contour Diagrams	1	Conical Hills, plateaus, Hill shading saddling	10
		2	Kinds of slope – Uniform, undulating, concave and convex	
		3	Kinds of valleys – ‘U’ shaped and ‘V’ shaped, ridge and cliff	
		4	Profiles	
II	Topographical maps	1	Importance of topographical maps	10
		2	Conventional signs and symbols of topo sheets	
III	Interpretation of Toposheets	1	Relief, drainage, vegetation, transportation and settlements	10

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

Semester – V

Paper: Regional Geography of India, Part – I (Hard Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Location, size and Extent	12
		2	Physiographical division – Northern Mountains, Great plains of Northern India, Peninsular Plateau, Coastal Plains and Islands	
II	Climate	1	Seasons, Mechanism of Monsoons	10
		2	Drought and floods	
III	Soils and Forests resources	1	Characteristics – types, distribution, soil erosion, conservation and dry land development programme	10
			Forests - Types, Distribution, conservation and social forestry	
IV	Drainage System and river valley projects	1	Rivers of India	10
			Multipurpose river valley projects – Bhakra Nangal and Damodar valley project	
V	Agriculture	1	Types, Characteristics, Green Revolution, White revolution	10
		2	Major Agricultural Regions – NRSC Classification	

References:

1. Economic and Commercial Geography of India-C.B.Mamoria,Publication Div.Calcutta,1996.
2. Economic Geography of India-Dubey & Negi,New Delhi,1999.
3. Geography of India-Gopal Singh Pub.Div.New Delhi,2001.
4. A New Approach to Economic Geography of India-Guha and Chatteraj, Pub.Div.Calcutta,2001.
5. Economic Geography of India-Kamlesh Patiwal,New Delhi,1996.
6. Regional Geography of India-R.L.Singh,New Delhi,1998.
7. Bharathada Arthika Bhugola Shasthra-P.Mallappa,Vidhynidi Prakashan Station road,Gadag,1999.
8. Bharathada Arthika Bhugola Shasthra-Nanjannavara S.S. Vidhynidi Prakashan Station road,Gadag,2000.
9. Bharathada Arthika Bhugola Shasthra- Dr.Ranganath. Vidhynidi Prakashan Station road,Gadag,1998

SEMESTER – V

Practical Paper – V: Map Projections – I (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction to Projections	1	Definition, classification and Importance of Projections	10
II	Cylindrical Projections	1	Simple Cylindrical	10
		2	Cylindrical equal area	
		3	Mercator's projection	
III	Conical Projections	1	Simple Conical projection	10
		2	Conical projection with two standard parallel	
		3	Bonne's Projection	
		4	Polyconic projection	

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

Semester – V

Paper: Environmental Geography (Soft Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Meaning, definition, scope and importance of Environmental Geography	10
		2	Relationship of Environmental geography with other sciences	
II	Environment	1	Definition, meaning and components of Environment	10
		2	Biogeochemical cycles – Hydrological cycles, Nitrogen Cycles and Carbon Cycles	
III	Ecosystem	1	Meaning of Ecology and Ecosystem	12
		2	Types and functioning of Ecosystems	
		3	Producers, Consumers and Decomposers	
		4	Food chain, Food web and Ecological pyramids	
IV	Bio-diversity and its conservation	1	Meaning, Definition of Genetics and Species	10
		2	Bio-geographic classification of India	
		3	Biomes – Meaning and types, distributions of major biomes in the World	
V	Environmental Pollution	1	Definition, causes, effects and control measures	10
		2	Air, water, Soil and noise pollution	
		3	Solid waste management – causes, effects and control measures	
		4	Natural Hazards and Disaster	

References:

1. Environmental Geography-Savindra Singh, New Delhi, 1998.
2. Environmental Geography-Saxena H.M., Rawar Publications, Jaipur, 1999.
3. Environmental Geography-Sinha S.P., New Delhi, 1999.
4. Geography of man's Environment- Strahler A.N. & Strahler A.H., John Wiley, New York, 1986.
5. Fundamentals of Ecology-P.D.Odum., WB Saunders Co, London, 1971.
6. Bio Geography-Robinson A., New York, 1968.
7. Environmental Pollution –Katyal T., New Delhi, 1998.
8. An Introduction to our Earth and Environment-Singh J & Singh D.N., New Delhi, 1998.
9. Parisara Sumrakshanna Kayadagullu-Prof.K.Verappa, Vidhynidi Prakashan Station road, Gadag, 1999
10. Parisara Bhoogola Shastra-Dr.Ranganath & M.B.Goudar, Vidhynidi Prakashan Station road, Gadag, 2000.

SEMESTER – V

Practical Paper – VI: Basic Statistics (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction to Statistics	1	Definition, Scope and Importance of statistics	10
		2	Methods of data collection – Primary and Secondary; Census and Sampling	
II	Measures of Central Tendency	1	Mean	10
		2	Median	
		3	Mode	
III	Measures of Dispersion	1	Mean Deviation (both for grouped & ungrouped data)	10
		2	Standard Deviation	

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

Semester – V

Paper: Settlement Geography (Soft Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Meaning, Nature, Scope and Importance of Settlement Geography	10
		2	Factors influencing the Settlement pattern and its types	
II	Rural settlements	1	Definition, classification based on site and situation, shape and function	10
		2	Rural settlements - types in India	
III	Housing Types	1	Evolution of dwellings, Influencing factors, construction materials, ground plans, Roofing types	10
		2	Housing types in India	
IV	Urban Settlement	1	Definition, Growth, stages, location and situation of Urban settlements	12
		2	Classification of Urban settlement – Hierarchy of urban settlement – Rank-Size rule, Concept of Primate City, structure of urban settlement.	
V	Urban Fringe	1	Definition, characteristics and its development	10
		2	Slum formation and measures of slum clearance	

References:

1. Principles of Human Geography-Huntington, New Delhi Revised Edition ,1987.
2. Human Geography-Hussain M.,Rawat Publications Jaipur,2003.
3. Human Geography- Nellson,Gabler & Vining,New York,1995.
4. Man and his habitation-Singh R.L.,Rawath Publication,1987.
5. Principles of Human Geography-Vidal-de-la-Blache.,Charlies.E.Merill Publishing Company,1992.
6. Human Geography-Majid Hussain.,New Delhi,1998.
7. Geography of Man's Environment-Strahler A.H. & Strahler A.N.,Macmillan Publishing Company,1992.
8. Introduction to human geography –Dickens and Pitts.New York,1963.
9. Human Geography (Kannada)-Ranganath and Mallappa.,Gadagh,1999.

SEMESTER – VI

Paper: Regional Geography of India, Part – II (Hard Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Human Resources	1	Growth, distribution and density	10
		2	Composition – Literacy, Sex ratio	
II	Mineral and Power Resources	1	Distribution, Production and trade of Iron, Manganese and Bauxite	12
		2	Distribution, Production and trade of coal, petroleum, natural gas	
		3	Electricity: Thermal, Hydel and Atomic	
		4	Non-conventional sources of energy	
		5	Power crisis	
III	Industries	1	Location, distribution and production trend of Iron, steel, cotton textiles, Sugar, Paper Industries	10
		2	Industrial Regions	
IV	Transportation and Trade	1	Detailed study of Network of roads	10
		2	NHDP, Railways, Airways	
		3	International – Volume direction	
		4	Composition of Foreign trade – recent trends	
V	Tourism	1	Factors influencing the development of tourism	10
		2	Types of major tourist centers	
		3	Problems and prospects of tourism in India	

References:

1. Economic and Commercial Geography of India-C.B.Mamoria.,New Delhi,1998.
2. Economic Geography of India-Dubey & Negi,Rawarh Publication,1968.
3. Geography of India-Gopal Singh,New Delhi,1967.
4. A New Approach to Economic Geography of India-Guha and Chattoraj, Pub.Div.Calcutta,1998.
5. Economic Geography of India-Kamlesh Patiwal,Rawarh Publication,Jaipure,1999.
6. Regional Geography of India-R.L.Singh,New Delhi,1998.
7. Bharathada Arthika Bhugola Shasthra-P.Mallappa. Vijaya Book Depot & Prakashan,1999.
8. Bharathada Arthika Bhugola Shasthra-Nanjannavara S.S., Vijaya Book Depot & Prakashan,2000.
9. Bharathada Arthika Bhugola Shasthra- Dr.Ranganath., Vijaya Book Depot & Prakashan,1996.

SEMESTER – VI

Practical Paper – VII: Map Projections – II (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Zenithal Projection	1	Equi-distant, equal area, Gnomonic, Stereographic and orthographic projections	10
II	Conventional Projection	1	Sinu Sodial Projections	10
		2	Mollweids projections	
		3	Gall's projection	
III	Choice of Map Projection	1	Uses of Map projections	10

References:

1. Elements of Practical Geography – Singh R.L., Kalyani Publishers, New Delhi, 1979.
2. Statistics for Geoscientists-Techniques and Applications-Pal.S.K., New Delhi, 2006.
3. Elements of Cartography, Robinson, A.H. et al., John Wiley & Sons, U.S.A., 1995
4. Working with maps – Gupta K.K. and Tyagi V.C. Kalyani Publishers, New Delhi, 2001.
5. Fundamentals of Cartography – Mishra R.P & Ramesh, Mcmillan Co., New Delhi, 1986.
6. An Introduction to Practical Geography, Part 1- Dr. Ranganath, Vijaya Book Depot & Prakashan, 1996.
7. Map Work Phyllis Dink, Atma Ram & Sons, New Delhi, 2002.

SEMESTER – VI

Paper: Economic Geography of the World (Soft Core)

Teaching hours per week: 4

Maximum Marks: 100 Marks

Internal Assessment: 30 Marks

Semester End Examination: 70 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Definition, importance and approaches of Economic Geography	10
		2	Man and Environment – study of environmental factors and their influence on the Economic activities	
II	Soil, Mineral and Power Resources	1	Types, distribution and conservation	12
		2	Soil Profile	
		3	Distribution, Production and trade of Iron Ore, Manganese, Bauxite	
		4	Distribution, Production and trade of Coal petroleum and atomic minerals	
III	Agriculture	1	Major crops – Rice, Wheat, Cotton, Sugarcane, coffee and tea	10
		2	Animal Husbandry – dairy farming regions	
		3	Fishing – Influencing factors – major fishing areas – aqua culture	
IV	Industries	1	Location – factors affecting industrial location	10
		2	Major industries – Iron and Steel , Cotton and Textiles	
V	Transportation and Trade	1	Transcontinental roads and railways	10
		2	Major ocean routes	
		3	International Trade – basis of trade, patterns and trends	

References:

1. A New Approach to Economic Geography-Guha and Chattoraj, Pub. Div. Calcutta, 2001.
2. Economic and Commercial Geography-Khanna and Gupta, New Delhi, 2000.
3. Economic and Commercial Geography-Chowdhari M.R., Rawarh Publications, JAipure, 2002.
4. Economic Geography-Alexander J.V., New York, 1996.
5. Economic Geography- Jones C.F. & Darkanwald E.B., New York, 1998.
6. Hand Book of Economic geography-Chisolm, New Delhi, Revised Publication, 1998.
7. World Resources and Resource trade-Khanna & Gupta, New Delhi, 1998.
8. Prapanchada Arthka Bhoogola Shastra-P. Mallappa & Ranjanath, Vijaya Book Depot & Prakashan, 1999
9. . Prapanchada Arthka Bhoogola Shastra-Nanjannavar S.S., Vijaya Book Depot & Prakashan, 2001.

SEMESTER – VI

Practical Paper – VI: Fundamentals of GIS and Remote Sensing (Hard Core)

Teaching hours per week: 3

Maximum Marks: 50 Marks

Internal Assessment: 15 Marks

Semester End Examination: 35 Marks

Exam Duration: 3 hours

Sl. No.	Unit	Sub-unit		No. of periods
I	Fundamentals of GIS	1	Meaning of GIS	10
		2	Components of GIS	
		3	Recent trends in GIS	
II	Remote Sensing	1	Meaning, Definition and principles of Remote Sensing	10
		2	Stages in Remote Sensing	
		3	Applications of Remote Sensing	
III	Representation of Socio-Economic Data	1	Line graph	10
		2	Bar graph	
		3	Pie graph	
		4	Compound bar graph	

References:

1. Principles of Geographical Information System for Land Resources Assessment- Bourroughs P.A., Clarendon Press, Oxford, 1996.
2. The ABC's of Internet-Cristian Crumtish, Willy, New York, 1997.
3. Computers Today-Sander B.H., New Delhi, 2001.
4. Terrain Analysis in Remote Sensing-John R.G. & Townshed, New York, 1998.
5. Internet for Everyone-Leon Vikas Publication, 2002.
6. Remote Sensing in Geographic Information System-Anji Reddy M, 2001.
7. A Study of Land Use And Land Cover in and Around Belgaum City Using GIS and Remote Sensing, Lambrat Publication Germany -Dr.Rita Basanna., 2013.
8. Geographic Information System, An Introduction-Star J.C. and J.E., New York, 2012.
9. Computer in Geography, Longman Publication -Maguira D.J., 2013.02

SEMESTER – VI**Paper: Population Geography (Soft Core)****Teaching hours per week: 4****Maximum Marks: 100 Marks****Internal Assessment: 30 Marks****Semester End Examination: 70 Marks****Exam Duration: 3 hours**

Sl. No.	Unit	Sub-unit		No. of periods
I	Introduction	1	Nature and scope of Population Geography	10
		2	Population growth, distribution and density – Demographic cycle, Factors and patterns of fertility, Factors and patterns of mortality	
II	Population Composition	1	Elements of Population composition -	12
		2	Literacy – Growth and distribution	
		3	Age structure – pyramids	
		4	Sex ratio – patterns of sex ratio	
		5	Life expectancy - patterns	
		6	Occupational structure	
III	Human Migration	1	Causes and types of migration	10
		2	Consequences of human migration	
IV	Problems of Population	1	Problems of population in developed and less developed countries	10
		2	Ethnic, racial, Linguistic and Religious problems	
		3	Population policies	
V	Population and resources	1	Optimum population	10
		2	Population resource regions	
		3	Population policies in India	

References:

1. Geography of Population -R.C.Chandana,Rawath Publication Jaipur,2003.
2. Fundamental of Population Geography-Ghosh B.N.,New Delhi,2000.
3. Human Geography-Majid Hussian, Rawath Publication Jaipur,2003.
4. A Geography of Population-Trewarth G.T.,John Willey Newyork 1969.
5. Demography-Jingam M.L. & B.K. Bhatt,New Delhi,1996.
6. Population Geography-R.K.Tripati,New Delhi,2000.
7. Geography of Population-Kayastha S.L.,New Delhi,1999.
8. Geography of Population-Clerk I.,Pergamon Press,Oxford,1965.