



**COURSE SCHEME FOR UNDER GRADUATE CLASSES UNDER CHOICE BASED CREDIT SYSTEM (CBCS) FROM 2016 ONWARDS**

Semester	Core Courses (12) 4+2= 6 credits	AECC (2) Ability Enhancement Course 2 credits each	SEC (4) Skill Enhancement Course 4 Credits each	DSE (6) Discipline Specific Elective 4+2=6 credits	ENG (4) 2 Credits
1st	DSC-1A	Commu Eng-I- 2 Evs -I 2			
	DSC-2A				
	DSC-3A				
2nd	DSC-1B	Commu Eng-II- 2 Evs -II 2			
	DSC-2B				
	DSC-3B				
3rd	DSC-1C		SEC-I		ENG-I
	DSC-2C				
	DSC-3C				
4th	DSC-1D		SEC-II		ENG-II
	DSC-2D				
	DSC-3D				
5th			SEC-III	DSE-1A	ENG-III
				DSE-2A	
				DSE-3A	
6th			SEC-IV	DSE-1B	ENG-IV
				DSE-1B	
				DSE-1B	
	6 x 12= 72	4 x 2 = 8	4 x 4=16	6 x 6=36	2 x 4=8 <b>140 credits</b>

**NOTE:** For taking Geography as one of the core subject in B.A/B.Sc course, a candidate is required to take one core course from Geography in the first and second semester comprising of 6 credits each (theory 4 credits + practical 2 credits). In third and fourth semester a candidate is required to take one core course of 6 credits each (theory 4 credits +practical 2 credits) along with one skill enhancement course (SEC) comprising of four credits in both third and fourth semesters. In the fifth and sixth semester, a candidate is required to take at least one Discipline Specific Elective (DSE) of 6 credits along with one Skill enhancement course (SEC) of four credits each for fifth and sixth semester.



**Course Structure                      UGSCBCS -2016                      B.A/B.Sc. Geography**

Semester	Name of the Course	Course Number	Nature of Course	Credits
1 <sup>st</sup> .	Elements of Physical Geography	GG-CR-16101	CORE	4
	Practical-Cartography	GGP-CR-16101	CORE	2
2 <sup>nd</sup> .	Philosophies & Methodologies in Geography	GG-CR-16201	CORE	4
	Practical-Surveying	GGP-CR-16201	CORE	2
3 <sup>rd</sup> .	Human Geography	GG-CR-16301	CORE	4
	Practical- Quantitative Techniques in Geography	GGP-CR-16301	CORE	2
	Surveying and its Applications	GG-SEC-16301	Skill Enhancement Course	4
4 <sup>th</sup> .	Geography of India	GG-CR-16401	CORE	4
	Practical- Remote Sensing Techniques	GGP-CR-16401	CORE	2
	Regional Planning & Development	GG-SEC-16401	Skill Enhancement Course	4
5 <sup>th</sup> .	Geography of Tourism	GG-DSE-16501	Discipline Specific Elective	6
	Economic Geography	GG-DSE-16502	Discipline Specific Elective	6
	GIS & GPS Applications	GG-SEC-16501	Skill Enhancement Course	4
6 <sup>th</sup> .	Fundamental of Disaster Management	GG-DSE-16601	Discipline Specific Elective	6
	Field Techniques and Survey Based Project Report	GG-SEC-16601	Skill Enhancement Course	4

**Note: Lectures per week: 4 of one hour. Practical per week: 2 of two hours each**



**GG-CR-16101**

**Elements of Physical Geography**

**Marks: 60**

**Credit-I**

- 1) Introduction to Physical Geography and its Various Branches
- 2) Structure of Earth's Interior
- 3) Wegener's theory of Continental Drift
- 4) Concept of Seafloor spreading, Plate Tectonics and Isostasy
- 5) Earthquakes: origin, types, measurement

**Credit –II**

- 1) Origin and characteristics and Classification of rocks
- 2) Weathering: Factors and Types
- 3) Earth movements
- 4) Exogenetic and Endogenetic Forces/Processes
- 5) Landform and their formation (Fluvial, Glacial, Aeolian and Karst)

**Credit -III**

- 1) Definition and Significance of Climatology
- 2) Insolation and Global Energy Budget
- 3) Atmospheric Pressure and Winds (Planetary, Periodic and Local winds)
- 4) Precipitation: Types and Global Distribution Patterns
- 5) Atmospheric Disturbances: Tropical and Temperate Cyclones / Anti-cyclones

**Credit -IV**

- 1) Surface configuration of the Ocean floor- Continental Shelf, Continental Slope, Abyssal Plain, Mid- Oceanic Ridges and Oceanic Trenches
- 2) Coral reefs: Significance, Origin and Types
- 3) Tides: Origin and Types
- 4) Currents: Origin and Types; Currents of Atlantic ocean
- 5) Oceans as Store-houses of resources for the future

**Suggested Readings**

1. Singh, S.: Geomorphology, Prayag Pustakalaya, Allahabad, 1998.
2. Sparks, B.N.: Geomorphology, Prayag Pustakalaya, Allahabad, 1998
3. D. S. Lal, Physical Geography, Sharda Pustak Bhawan, 2009
4. Savindra Singh, Physical Geography, Prayag Pustak Bhawan, 2000
5. Majid Hussain, Physical Geography, Anmol Publications Pvt. Ltd., 2007
6. S. A. Qazi, Principles of Physical Geography, AHP Publishing Co. 2004
7. Satopa Mukherjee, Understanding Physical Geography, Oriental Longman 2002
8. A. H. Strahler & A. N. Strahler, Modern Physical Geography, John Willy & sons, Inc. 2001.
9. Barry, R. G & Chorley, R.J., Atmosphere, Weather and Climate Routledge, 1998.
10. Critchfield, H, General Climatology, Prentice Hall, New York, 1975.
11. Stringer, E.T Foundation of Climatology, Surjeet Publication, Delhi, 1982.
12. Grald, S, General Oceanography- An Introduction, John Wiley & Sons, New York, 1980.
13. King, C.A.M., Oceanography for Geographers, E Arnold, London ,1975.



**GGP-CR-16101- Practical**

**Cartography**

**30 Marks**

**Credit – I**

- 1) Essentials of Map: Scale, Projection, Direction and Conventional Signs
- 2) Scales: Definition and Types
- 3) Construction of Scales: Plain, Diagonal and Comparative
- 4) Contours: Definition and importance: Representation of different Landforms by Contours

**Credit – II**

- 1) Drawing of Profile: Serial, Longitudinal, Superimposed, Composite and Projected Profiles
- 2) Uses of line and Bar graphs for representing population, agriculture, industry and transport data
- 3) Representation of population distribution, density, growth by different Cartographic methods – Point, Line and Area.
- 4) Digital Cartography : Definition, Scope and Applications

**Suggested Readings**

1. Robinson, A.H et al., Elements of Cartography, John Wiley & Sons, U.S.A., 1995.
2. Sarkar, A.K., Practical Geography: A Systematic Approach, Oriental Longman, Calcutta, 1997.
3. Singh, R.L and Dutt, P.K., Elements of Practical Geography, Kalyani Publishers New Delhi, 1979.
4. Gopal Singh, Map World and Practical Geography, Vikas Publishing House, 2000
5. Kali Charan Sahu, Textbook of Remote Sensing and Geographic Information System, Atlantic Publishers and Distributors, 2008



**GG-CR-16201 Philosophies & Methodologies in Geography**

**Marks: 60**

**Credit-I**

- 1) The Nature of Geography
- 2) Objectives and relevance of Geography
- 3) Various Branches of Human Geography
- 4) Major themes of Geography (Areal Differentiation, Man-Environment Interaction & Spatial organization)
- 5) Dualism in Geography:
  - i. Regional/Systematic
  - ii. Physical/Human
  - iii. Historical/Contemporary

**Credit -II**

- 1) Contribution of Phoenicians in the field of Geography
- 2) Contribution of Greeks in the field of Geography
- 3) Contribution of Romans in the field of Geography
- 4) Contribution of Arabs in the field of Geography
- 5) Impact of Dark-ages on Geography

**Credit -III**

- 1) Geography as the study of Environment
- 2) Definition, Scope and significance of Ecology
- 3) Concept and broad types of Ecosystem
- 4) Biodiversity: Concept, Importance and Conservation
- 5) Ecological imbalances, causes and consequences

**Credit -IV**

- 1) Quantitative Techniques and their relevance in Geography
- 2) Quantitative Revolution in Geography
- 3) Geomorphic field survey: Meaning, Significance and Procedure
- 4) Socio-Economic field survey: Meaning, Significance and Procedure
- 5) Application of Remote Sensing in Geomorphology, Land use and Natural Hazards

**Suggested Readings**

1. Dikshit R D: Geographical Thought -A contextual History of Ideas. Prentice Hall India, New Delhi, 2000.
2. Hartshorne, Richard: Perspectives on the Nature of Geography, Rand McNally and Co., Chicago. 1959.
3. Harvey, David: Explanation in Geography, Edward -Arnold London, 1972.
4. Husain, Majid: Evolution of Geographical Thought, Rawat Publications, Jaipur, 1984.
5. James, P E: All Possible Worlds: A History of Geographical Ideas, Sachin Publication, Jaipur, 1980.
6. A.H.Strahler &A.N.Strahler, Modern Physical Geography, John Willy & sons, Inc 2001
7. M. Z. A. Khan & S.K. Agarwal, Environmental Geography, AHP Publishing Co.2010
8. S. Gupta & M. Gupta, Environment I Population and Resources, 1997



**GGP-CR-16201- Practical**

**Surveying**

**Marks: 30**

**Credit – I**

- 1) Introduction to Surveying, Classification and types of Surveying
- 2) Plain Table Survey: Definition, Accessories, Procedure and Precautions
- 3) Radial, Intersection and Resection methods of Plain Table Survey
- 4) Tracing Paper Method and Trial and Error Method

**Credit - II**

- 1) Study of survey of India Topographic maps
- 2) Interpretation of survey of India topo-sheets with respect to Relief, Drainage, Settlements and Communication patterns
- 3) One day Socio-Economic field survey of local area within the District.

**Suggested Readings.**

1. Robinson, A.H et al., Elements of Cartography, John Wiley & Sons, U.S.A., 1995.
2. Sarkar, A.K., Practical Geography: A Systematic Approach, Oriental Longman, Calcutta, 1997.
3. Singh, R.L and Dutt, P.K., Elements of Practical Geography, Kalyani Publishers New Delhi, 1979.
4. Gopal Singh, Map World and Practical Geography, Vikas Publishing House 2000
5. Kali Charan Sahu, Textbook of Remote Sensing and Geographic Information System, Atlantic Publishers and Distributors 2008



**GG-CR-16301**

**Human Geography**

**Marks: 60**

**Credit -I**

- 1) Determinism and Possibilism
- 2) Pragmatism, Radicalism and Positivism
- 3) Behavioural Approach
- 4) Humanistic Approach

**Credit -I**

- 1) Races: Physical and Socio-Economic Characteristics, Spatial Distribution
- 2) Major Religious Groups: Spatial diffusion and distribution (Christianity , Islam, Hinduism and Buddhism)
- 3) Economic activities ( Primary Secondary, Tertiary and Quaternary)
- 4) Human Adaptation and Environment
  - i. Cold region- Eskimo
  - ii. Mountain –Gujjars

**Credit -III**

- 1) Population: Structure and Composition (Age, Gender), Comparison between developed and developing countries
- 2) Distribution and density of Population: Factors (Geographic, Socio-Economic and Demographic)
- 3) Concepts of Over-Population, Under-Population and Optimum-Population, Zero-Population growth
- 4) Theories of Population Growth: Malthus and Demographic Transition

**Credit -IV**

- 1) Meaning, Nature and Classification of Resources
- 2) Resource Conservation: Meaning and Importance
- 3) Methods of Conservation of Resources: Soil, Water, Forests and Minerals
- 4) Land degradation: Causes and Consequences

**Suggested Readings**

1. Beblig, H.J., Human Geography: Culture, Society and Space, John Wiley, New York, 1996.
2. Singh, K.N., People of India, An Introduction, Seagul Book, 1992.
3. Spate O.H.K, People of India, An Introduction, Seagul Books, 1992.
4. Majid Hussain, Human Geography, Rawat Publications 1994
5. L. N. Verma, Urban Geography, Rawat Publications 2006
6. Grish Chopra, Economic Geography, Commonwealth 2006
7. T. C. Sharma, Economic Geography of India, Rawat Publications 2013
8. R. K. Jain, A Textbook of Population Studies, Astha Publishers and Distributors 2014
9. Hans Raj, Fundamentals of Demography, Surjeet Publications.



**GGP-CR-16301- Practical Quantitative Techniques**

**Marks: 30**

**Credit – I**

- 1) Measures of Central Tendency: Mean, Median, Mode, Partition Values (Quartiles, Deciles & Percentiles)
- 2) Measures of Dispersion: Mean Deviation, Standard Deviation and Coefficient of Variation in data analysis
- 3) Correlation Analysis: Scatter Diagram and Karl Pearson's method
- 4) Use of above mentioned Statistical tools in Physical and Socio-Economic Data Analysis

**Credit – II**

- 1) Field work and Field report of Physical Geography of the Area.

**Suggested Readings**

1. Pal, S.K., Statistics for Geographers- Techniques and Applications, Concept, New Delhi, 1998.
2. Jones, p .A. , Fieldwork in Geography, Longman,1968.
3. Khan, Z.A., Text Book of Practical Geography. Concept publications, New Delhi, 1963.
4. Singh, R.L. and Dutt, P.K.: Elements of Practical Geography Kalyani Publishers, New Delhi.
5. Steers, J.A., Map projections, University of London press, London
6. Ashis Sarkar, Quantitative Geography- Techniques and Presentation, Oriental Blackswan 2013
7. B. C. Panda, Remote Sensing- Principles and Applications, Viva Books 2008
8. Khan. Z.A.,text Book of Practcal Geography, Concept, New Delhi, 1998.
9. Monkhouse, F.J. & Wilkinson, H.R., maps and Diaghrams, Mthuen, London, 1994.
10. Sarkar ,A.K., Practical Geography- A Systematic Approach, orient Longman, Calcutta, 1997.
11. Singh,R.L.,Elements of Practical Geography, Kalyani Pub, New Delhi.
12. L. R. Singh, Fundamentals of Practical Geography, Sharda Pustak Bhawan 2006
13. Gopal Singh, Map World and Practical Geography, Vikas Publishing House 2000
14. N. N. Basak, Surveying and Leveling, Tata McGraw Hill 1997
15. D. N. Elhance, V. Elhance & B. M. Aggarwal, Fundamentals of Statistics, Kitab Mahal 2008.





**GG-SEC-16301**

**Surveying and its Applications**

**Marks 60**

**Credit -I**

- 1) Meaning , Scope of Surveying
- 2) Types of Surveying
- 3) Surveying Instruments

**Credit- II**

- 1) Chain and tape (3-exercises)
- 2) Plane table (3-exercises)
- 3) Dumpy level (3-exercises)
- 4) Theodolite (3-exercises)

**Credit -III**

- 1) Total Station - Characteristics
- 2) Functions of Total-Station
- 3) Handling and Setting of Total-Station
- 4) Levelling, Centring and Orienting

**Credit -IV**

- 1) Measuring Angles, Distances and Heights
- 2) Land parcel Calculation

**Suggested Readings**

1. Pal, S.K., Statistics for Geographers- Techniques and implications, Concept, New Delhi, 1998.
2. Robinson, A.H et al., Elements of Cartography, John Wiley and Sons, U.S.A., 1995.
3. Sarkar, A.K., Practical Geography: A Systematic Approach, Oriental Longman, Calcutta, 1997.
4. Singh, R.L, and Dutt, P.K., Elements of Practical Geograph;y Kalyani Publishers New Delhi, 1979.
5. Gopal Singh, Map World and Practical Geography; Vikas Publishing House 200.



**GG-CR-16401**

**Geography of India**

**Marks: 60**

**Credit -I**

- 1) Land: Physical Divisions and Drainage Systems of India.
- 2) Climate: General Climatic Conditions and Seasonal Variations in India
- 3) Monsoons: Mechanism and its types (Classical and Modern theory)
- 4) Soil: Types and Distribution

**Credit –II**

- 1) Population: Distribution, Density and Growth since 1951
- 2) Land Resources and Utilization
- 3) Characteristics of Indian Agriculture
- 4) Distribution and Production of Food Crops: Rice and Wheat

**Credit – III**

- 1) Distribution and production: Iron Ore, Coal and Petroleum in India
- 2) Cotton Textiles Industry
- 3) Iron and Steel Industry
- 4) Major Industrial Regions of India

**Credit –IV**

- 1) Physical Divisions: Drainage, Climate and vegetation (J&K)
- 2) Population Distribution: Density and Growth (J&K)
- 3) Agriculture with special reference to Horticulture and Saffron (J&K)
- 4) Tourism industry (J&K)

**Suggested Readings**

1. Drew, F .K.,The territories of India, Kashmir State. Standard Press London. 1979 :
2. Gazetter of Kashmir and Ladakh. (1890) Reprint (1974).
3. Lawrence, S.W. The Valley of Kashmir, Oxford University Press. 1895.
4. Raina, A.N. Geography of Jammu and Kashmir. National Book Trust, New Delhi, 1971.
5. Spate, O.H.K., India and Pakistan, Mac Million & Co. 1967.
6. Singh, R.L. , India, Regional Geography, Banarus Hindu University, 1987
7. Qazi, S.A., Geography of India with special reference to J&K State, APH Publishing Co. 2000.
8. Majid Hussain, Systematic Geography of Jammu and Kashmir, Rawat Publications 2000
9. R. L. Singh, India- A Regional Geography, National Geographical Society of India 2003
10. Chandra Vijay Purty, Geography of India, ABD Publishers.
11. Majid Hussain, Geography of India, 2nd Ed. Tata Mcgraw Hill, 2011
12. D. R Khullar, Geography of India,



**GGP-CR-16401 –Practical Remote Sensing Techniques Marks: 30**

**Credit -1**

- 1) Remote Sensing: Definition, Scope and Applications
- 2) Types of Remote Sensing.
- 3) Sensors and their types
- 4) Satellite Images and their Interpretation

**Credit -II**

- 1) Types of Remote Sensing Data
- 2) Scale of Aerial Photographs and Methods of its Determination
- 3) GPS: Definition, Principles
- 4) Applications of GPS

**Suggested Readings**

1. Kali Charan Sahu, Textbook of Remote Sensing and Geographic Information System, Atlantic Publishers and Distributors 2008
2. B.C. Panda, Remote Sensing- Principles and Applications, Viva Books 2008
3. Jensen, R Fundamentals of Remote Sensing. Shree Maitree Printech Pvt Limited Noida 2007
4. Gopal Singh, Map World and Practical Geography, Vikas Publishing House 2000



**GG-SEC-16401 Regional Planning & Development**

**Marks 60**

**Credit-I:**

- 1) Concept of Region & Types of Region
- 2) Concept of Planning & Types of Planning
- 3) Meaning & Definition of Regional Planning
- 4) Significance of Regional planning

**Credit-II:**

- 1) Significance of Regional Planning in India
- 2) Introduction of Regional Planning in India
- 3) Achievements of Regional Planning in India

**Credit-III:**

- 1) Detailed Case Study of any Regional Plan of India

**Credit-IV:**

Prepare a Regional Development Plan of any selected region by adopting the following Procedure;

- i. Make a concept note of the plan of selected region
- ii. Prepare a physical map of the region
- iii. Make a comprehensive inventory of all the resources and also prepare thematic maps for each resource
- iv. Prepare a regional developmental plan highlighting the objectives & targets, resources, constraints, implementation & execution, & Plan revision.

**Suggested Readings**

1. V.L.S Prakasa Rao (1960), Regional Planning, Indian Statistical Institute, Calcutta
2. K.V. Sundaram (1979) , Urban and Regional Planning in India, Vikas Publishers, New Delhi
3. R.P. Misra et al. (1974), Regional Planning in India, Vikas Publishers, New Delhi
4. Mahesh Chand , V. K. Puri , (2011), Regional Planning in India, Concept Publishers
5. K. Siddhartha and S. Mukherjee, (2014), Regional Planning
6. Mishra ( 1985) Economics of Development and Planning
7. S. K. Kulshrestha (2012)Urban and Regional Planning in India, Sage Publications
8. R. P. Misra (1974) Planning for Backward Areas, Institute of Development Studies, Mysore
9. R. P. Misra (1992), Regional Planning: Concepts, Techniques, Policies and Case Studies, Concept Publishing Company , New Delhi
10. Antoni Kuklinski, (1971) , Regional Planning, Vol. 1., United nations Research Institute for Social Development, IICD Library
11. Raj Kishore Wishwakarma (1981), Urban and regional planning policy in India, Uppal Publishing House, New delhi



**GG-DSE- 16501-**

**GEOGRAPHY OF TOURISM**

**Marks 90**

**Credit-I:**

- 1) Definition and Scope of Tourism Geography
- 2) Components of Tourism
- 3) The use of Geographical Resources for Tourism
- 4) Butlers Theory of Tourism Development

**Credit-II:**

- 1) Types and Forms of Tourism
- 2) Concept of Carrying Capacity
- 3) Sustainable Tourism
- 4) Environmental Impacts of Tourism

**Credit-III:**

- 1) Tourism Planning
- 2) Infrastructure and Support System
- 3) Accommodation Scenario
- 4) Social and Cultural Impacts of Tourism

**Credit-IV:**

- 1) Characteristics Indian Tourism
- 2) National Tourism Policy
- 3) Regional Dimension of Tourist Attraction
- 4) Problems and Prospects of Indian Tourism

**Credit-V:**

- 1) Significance of Tourism in J&K.
- 2) Tourist Flow and Distribution Pattern
- 3) Pilgrimage Tourism
- 4) Adventure Tourism in Jammu and Kashmir

**Credit-VI:**

- 1) Tourism Potential of Jammu and Kashmir
- 2) Tourism Promotion in J&K (A case study of Gulmarg)
- 3) Tourism Promotion in J&K (A case study of Pahalgam)
- 4) Problems and Prospects of Tourism in J&K

**Suggested Readings:**

1. S. N. Singh, "Geography of Tourism and Recreation", New Delhi, 1954.
2. S. C. Chandra, "Geography of Tourism". Rawat Publications, New Delhi 2002.
3. P.C. Sinha, "Eco-tourism and Mass tourism".Allahabad 2005.
4. M. Simith and Nichola Macleod, "Key Concepts in Tourist studies". 2010
5. B.s. Badan, "Tourism in India", Mumbai,1998.
6. A.C Singh & P.S. Rana, "Tourism Geography",Patna 2006.



**GG-CR-16502- ECONOMIC GEOGRAPHY**

**Marks 90**

**Credit-I:**

- 1) Introduction to Economic Geography
- 2) Classification of Economic Activities
- 3) Factors influencing Location of industry
- 4) Sectoral analysis of Economic activity in India

**Credit-II:**

- 1) Classification of Industries
- 2) Heavy and light Industries
- 3) Agro-based Industries
- 4) Industrial Regions in India

**Credit-III:**

- 1) Globalization and Privatization
- 2) Globalization and its Impact on Indian Economy
- 3) Concept of Knowledge Economy
- 4) Emerging trends in Indian Economy

**Credit-IV:**

- 1) Impact of Green Revolution on Indian Economy and Recent Developments
- 2) Role of Infrastructure (energy) in the Economic Development of India
- 3) Regional Disparities in the levels of Economic Development
- 4) Economic Reforms Post-1991

**Credit-V:**

- 1) Sectoral Composition of the Economy of Jammu and Kashmir
- 2) Role of Horticulture in the Economic Development of J&K State
- 3) Contribution of Handicrafts and Cottage Industry in the Employment Generation in J&K State
- 4) Role of Saffron in Agriculture of J&K

**Credit-VI:**

- 1) Hydro Power Potential of J& K
- 2) Mineral Resources of J&K (Gypsum, Limestone and Precious stone)
- 3) Tourism Industry of Jammu and Kashmir
- 4) Constraint of Industrial Development in J&K

**Suggested Readings**

1. Coe, N., Kelly, P., and Yeung, H. (2007) *Economic Geography: A Contemporary Introduction*, London: John Wiley & Sons
2. Leyshon, A., Lee, R., McDowell, L and Sunley, P. (eds) (2011) *The Sage Handbook of Economic Geography*, London: Sage
3. Aoyama, Y., Murphy, J., and Hanson, S. (2010) *Key Concepts in Economic Geography*, London: Sage
4. Clark, G., Gertler, M. and Feldman, M.(eds) (2003) *The Oxford Handbook of Economic Geography*, Oxford: Oxford University Press
5. *Economic Geography of India* by T. C Sharma
6. *Economic Geography* by Majid Hussain
7. *Economic Geography* By Prithwish Kumar Roy



**GG-SEC-16501      GIS & GPS Application      Marks 60**

**Credit I.**

- 1) Definition and Scope of GIS
- 2) Components of GIS
- 3) Spatial and Non-spatial Data
- 4) Data Processing and Analysis

**Credit II**

- 1) Geo-referencing of Satellite data, Subset (12 exercises)

**Credit III**

- 1) Image Interpretation (Manual and Digital (8 exercises)

**Credit IV**

- 1) Global Positioning System (Definition and Scope)
- 2) GPS Structure (Segments), Fundamentals of GPS Positioning
- 3) Preparation of Site Plan
- 4) Four exercises (GPS operations)

**Suggested Readings**

1. Kali Charan Sahu, Textbook of Remote Sensing and Geographic Information System, Atlantic Publishers and Distributors 2008
2. B.C. Panda, Remote Sensing- Principles and Applications, Viva Books 2008
3. Jensen, R Fundamentals of Remote Sensing. Shree Maitree Printech Pvt Limited Noida 2007
4. Gopal Singh, Map World and Practical Geography, Vikas Publishing House 2000



**GG-DSE-16601 - Fundamentals of Disaster Management**

**Marks 90**

**Credit-I:**

- 1) Meaning and Definition- Hazard and Disaster
- 2) Meaning & Definition of Disaster Management
- 3) Elements of Disaster Management
- 4) Significance of Disaster Management

**Credit-II:**

- 1) Disaster Vulnerability
- 2) Disaster Risk
- 3) Disaster Mitigation
- 4) Disaster Preparedness

**Credit-III:**

- 1) Disaster Management Cycle
- 2) Response Phase
- 3) Recovery Phase
- 4) Reconstruction and Rehabilitation Phase

**Credit-IV:**

- 1) Introduction to Geo-Physical Disasters
- 2) Earthquakes
- 3) Landslides
- 4) Tsunami

**Credit-V**

- 1) Introduction to Hydro-meteorological Disasters
- 2) Cyclones
- 3) Cloud bursts
- 4) Floods and Droughts

**Credit-VI:**

- 1) Introduction to Man-made Disasters
- 2) Chemical Disasters
- 3) Nuclear Disasters
- 4) Biological Disasters

**Suggested Readings**

1. Bryant Edwards (2005): Natural Hazards, Cambridge University Press, U.K
2. Carter, W. Nick, 1991: Disaster Management, Asian Development Bank, Manila
3. Firefly Guide to Global Hazards, Robert Louis Kovach, Bill McGuire, Firefly Books, 2004
4. H.K. Gupta (2003) Disaster management
5. David Etkin (2014) Disaster Theory, Elsevier





**GG–SEC–16601 Field Techniques & Survey Based Project Report**

**Marks 60**

**Credit – I**

- 1) Relevance of Geomorphic Field-studies in Geography
- 2) Relevance of Socio-Economic Field-studies in Geography
- 3) Selection of Study-area
- 4) Selection of Geomorphic aspects and Socio-Economic Variables

**Credit – II**

- 1) Preparation of Questionnaire
- 2) Customization of Questionnaire
- 3) Conducting of Socio-Economic Field survey of sample Households with the Structured Questionnaire
- 4) Identification and Interpretation of Geomorphic Features in the field

**Credit – III**

- 1) Data: Types and Sources
- 2) Methods of Data Collection
- 3) Tabulation of Data for Preparation of Master-sheets
- 4) Analysis of Data.

**Credit – IV**

- 1) Report writing based on results of Geomorphic and Socio-Economic Field-survey, supplemented with Photographs, Maps and Diagrams

**Suggested Readings:**

1. Pal, S.K., Statistics for Geographers- Techniques and Applications, Concept, New Delhi, 1998.
2. Robinson, A.H et al., Elements of Cartography, John Wiley and Sons, U.S.A., 1995.
3. Sarkar, A.K., Practical Geography: A Systematic Approach, Oriental Longman, Calcutta, 1997.
4. Singh, R.L, and Dutt, P.K., Elements of Practical Geography Kalyani Publishers New Delhi, 1979.
5. Gopal Singh, Map World and Practical Geography; Vikas Publishing House 200. .