

### **Gg- 420 : Regional Planning and Development (New)** (2008 Pattern)

Time: 3 Hours Total Marks: 80

**Instructions**:1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencil is allowed.
- 1. What is regional planning? Explain the scope and process of regional planning.
- 2. How are the techno-economic surveys important in regional planning?
- 3. Discuss the various planning strategies with reference to concentration versus dispersal.
- 4. What is multi-level planning? Bring out the salient features of multi-level planning in India.
- 5. Explain how the metropolitan regions for planning are delineated?
- 6. Give an account of planning for National Capital Region.
- 7. Write notes on **any two**:
  - a) Methodology for regional planning.
  - b) Command area as a planning unit.
  - c) Regional economic disparities in India.

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### M.A./M.Sc. (Semester – I) Examination, 2011 GEOGRAPHY Gg-101: Principles of Geomorphology (2004 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define geomorphology and elaborate the concepts of uniformitarianism and catastrophism.
- 2. Give an account of Homle's convection current theory.
- 3. Discuss various supporting evidences putforth by Alfred Wegners in view of his idea of continental drift.
- 4. Compare the process, weathering, mass ovement and erosion and explain slow and rapid movements in detail.
- 5. Define drainage basin abd describe various types of drainage patterns with respect to geological structure.
- 6. Describe various types of glaciers and explain various landforms produced due to erosional work of glaciess.
- 7. Write note on **any two**:
  - i) Ergodic principle
  - ii) Sea floor spreading
  - iii) Slope replacement model.



### M.A./M.Sc. (Semester – I) Examination, 2011 GEOGRAPHY (2004 Pattern) Gg-103: Principles of Economic Geography

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of recent trends in economic geography.
- 2. Critically examine the Von Thunen's model.
- 3. Explain how natural resources plays an important role in economic development of a region.
- 4. "Land, labour and capital are the three crucial factors in any economic activity". Discuss.
- 5. Classify the countries based on levels of economic development.
- 6. Give an account of post-independence economic development in India.
- 7. Write notes (any two):
  - I) Myrdal's model
  - II) Testing of hypothesis
  - III) Globalisation and India.



### M.A./M.Sc. (Semester – I) Examination, 2011 GEOGRAPHY (2004 Pattern) Gg-104: Principles of Settlement and Population Geography

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of evolution of settlement geography.
- 2. Describe the various factors influencing the growth and distribution of settlements.
- 3. Describe the impact of various factors on dispersion of settlements.
- 4. Critically examine the factors of urban growth.
- 5. "World population in unevenly distributed". Discuss.
- 6. Critically examine the Malthus theory of population growth.
- 7. Write notes (any two):
  - I) Pattern's of settlements
  - II) Central Place Theory
  - III) Education and health as aspects of population resource.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg 211 : Synoptic Climatology (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define synoptic climatology and describe various levels of climatological synthesis.
- 2. Explain the procedures of weather data analysis in detail.
- 3. Explain in detail the origin, structure and stages in the development of thunderstorm.
- 4. Define airmasses and give a comparative account of North America and Asia.
- 5. Explain the life cycle of wave cyclone with suitable diagrams.
- 6. Explain various types of precipitation with suitable diagrams.
- 7. Write notes on **any two**:
  - a) Process of formation of fog
  - b) Rossby waves
  - c) Importance of forecasting in aviation.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg-212: Agricultural Geography (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of origin and dispersal of agriculture.
- 2. Explain the significance of agriculture in Indian economy.
- 3. Explain the influence of economic and technological factors on agricultural patterns.
- 4. Define agriculture and explain subsistence agriculture with suitable examples.
- 5. Discuss various characteristics, problems and prospects agriculture in semi-arid regions.
- 6. Define agricultural regionalization and explain method of agricultural regionalization suggested by Bhatia.
- 7. Write notes on any two:
  - a) Land classification in India
  - b) Droughts impact on agriculture
  - c) Methods of crop combination.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg – 220 : Fluvial Geomorphology (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: i) Attempt any four questions.

- ii) All questions carry equal marks.
- iii) Use of map stencils is allowed.
- 1. Define fluvial geomorphology and elaborate its scope.
- 2. How do you distinguish between steady flow and unsteady flow? Explain regimes of flow.
- 3. Explain the capacity and competence of rivers with reference to sediment entrainment and transport.
- 4. Give an account of 'downstream hydraulic geometry'.
- 5. Explain in detail various channel patterns.
- 6. Explain various erosional features in a course of a river.
- 7. Write notes on any two:
  - a) Belt of no erosion
  - b) Gravel bed and bedrock channels
  - c) River metamorphosis.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY (2005 Pattern)

**Gg-220: Fluvial Geomorphology** 

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define fluvial geomorphology and elaborate its scope.
- 2. Explain regimes of flows with respect to uniform and non-uniform flows.
- 3. Give an account of 'at-a-station' hydraulic geometry with respect to width, depth, velocity and gradient of a channel.
- 4. Elaborate the concept of grade.
- 5. Discuss the cross section morphology of a channel and elaborate capacity and competence of a channel.
- 6. Explain different types of features associated with flood plains.
- 7. Write notes on any two:
  - i) Glocks model of drainage development
  - ii) Suspended load and bed load
  - iii) River metamorphosis.

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**Gg-313 : Urban Geography (New) (Special Paper – I)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define urban geography and describe its relation to other disciplines.
- 2. Critically examine the Homer Hoyet's morphological model of urban structure.
- 3. Explain the functional classification of towns by C. D. Harris.
- 4. What do you mean by rural-urban fringe? Describe various characteristics and methods of demarcation of rural-urban fringe.
- 5. Describe how the Central Place Theory explains rank-size relationship.
- 6. Define urban sprawl and describe the problems of civic amenities, urban transport and environmental pollution in urban centres.
- 7. Write notes on any two:
  - a) Criteria used to distinguish urban settlements.
  - b) Age-sex structure of urban population.
  - c) New towns.



### M.A./M.Sc. (Semester – III) Examination, 2011 GEOGRAPHY (Special Paper – II) Gg-320: Multivariate Statistics (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: i) Attempt any four questions.

- ii) All questions carry equal marks.
- iii) Use of calculators, statistical tables etc. is allowed.
- 1. a) Explain with example applications of multivariate methods in geography. 15
  - b) Explain with suitable examples, major types of matrices. 5
- 2. a) Find inverse of the following matrix.

 $N = \begin{bmatrix} 1.1 & 2.6 & 0.6 \\ 1.8 & 1.4 & 2.5 \\ 0.6 & 2.0 & 3.4 \end{bmatrix}$ 

b) Find the unknowns of the following simultaneous equations by Crammer's rule

$$x + 20y = 105$$

$$2x + 3y = 25$$

$$3x + 4y = 35$$

$$8x + 6y = 70$$

3. The following table represents correlations between different morphometric characteristics of drainage basin. Extract first two principle components from the correlation matrix and interpret the results.

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	<b>X1</b>	<b>X2</b>	<b>X3</b>	X4	X5
X1	1	0.08	0.34	0.14	-0.23
<b>X2</b>	0.08	1	0.30	0.40	-0.45
Х3	0.34	0.30	1	0.36	-0.36
X4	0.14	0.40	0.36	1	-0.59
X5	-0.23	-0.45	-0.36	-0.59	1

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X1 = Absolute relief

X2 = Relative relief

X3 = Dissection index

X4 = Drainage density

X5 = Stream frequency.

4. Compute the multiple regression equation from the following matrix of correlations and interpret the results.

X1	X2	Y
11.2	3	0.4
11.1	5	0.6
10.2	7	0.8
7.4	9	1.0
8.7	10	0.4
10.5	5	0.3
13.2	13	0.3
2.7	6	0.8
2.5	7	0.9

- 5. a) Describe the use of trend surface analysis in physical geography.
  - b) Explain bivariate curvilinear relationships.

**12** 



6. Following table represents the ground water depths (Z) and location coordinates of wells (X and Y). Compute a suitable trend surface equation and explained variance, check its statistical significance and interpret the results.

X (km)	Y (km)	<b>Z</b> (m)
7	12	2
8	14	06
9	17	09
10	07	11
3	3	16
5	6	09
04	09	10
06	06	06
09	10	02
11	12	16
12	12	13

7.	Write	notes	on	any	two	:
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- i) Data reduction
- ii) Component scores
- iii) Regionalization from factor analysis.

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**20** 



**Gg-401 : Resource Management (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencil is allowed.
- 1. Describe the various approaches to the resource management and their importance.
- 2. Give a detailed account of resource classification.
- 3. What is resource management? Describe the management of cultural resources.
- 4. How are the various aspects of population important in the resource management?
- 5. "An integrated view of sustainable management and development of resources is the need of the hour". Discuss.
- 6. Describe the distribution and developmental policy of population resources of India.
- 7. Write notes on any two:
  - a) Integrated surveys of natural resources
  - b) Appraisal of physical resources
  - c) Industrial development policy of India.



**Gg-424 : Research Methodology (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) **All** questions carry **equal** marks.

- 2) Attempt any four questions.
- 3) Use of map stencils is allowed.
- 1. What is surveying? Describe types of survey.
- 2. Explain the indexing system of SOI Toposheet with examples.
- 3. Discuss the geometry of aerial photograph.
- 4. Discuss application of various statistical methods in geographical research.
- 5. Describe various components of field work.
- 6. Explain in brief various aspects of report writing in geographical research.
- 7. Write notes (any two):
  - a) UTM projection
  - b) Testing of hypothesis
  - c) GIS.

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**Gg-432 : Oceanography (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: i) Attempt any four questions.

- ii) All questions carry equal marks.
- iii) Use of map stencils is allowed.
- 1. Explain the foundation of modern oceanography.
- 2. Discuss plate tectonics with reference to origin of ocean basins.
- 3. Discuss the salient features of submarine relief.
- 4. Describe the factors affecting the temperature of sea water and its distribution.
- 5. Give an account of equilibrium theory of tides.
- 6. Give an account of the classification of marine deposits on the basis of their location on the sea floor.
- 7. Write notes on **any two**:
  - a) Wave refraction
  - b) Tidal effects on coastal area
  - c) Ocean currents in Atlantic oceans.



**Gg-441 : Regional Geography of Europe (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: i) Attempt any four questions.

- ii) All questions carry equal marks.
- iii) Use of map stencils is allowed.
- 1. Explain major climatic types and their characteristics in Europe.
- 2. Describe the mineral resources and their distribution in Europe.
- 3. Give an account of development of industrial activities and evolution of industrial regions in Europe.
- 4. Write a geographical essay on 'International Trade of Europe'
- 5. Describe the growth and distribution of population in Europe.
- 6. Explain the problems of urbanization in Europe.
- 7. Write notes on **any two**:
  - i) Geostrategic importance of Europe
  - ii) Scope of tourism in Europe
  - iii) Age-sex structure in Europe.

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**Gg-445 : Geography of India (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Mention Physiographic regions of India and describe in detail the north Indian plain.
- 2. Explain the summer season and associated weather conditions in India.
- 3. Describe major soil types and their distribution in India.
- 4. Give an account of mineral resources in India.
- 5. Discuss the distribution and production of rice and wheat in India.
- 6. Explain the distribution of cotton textile and sugar industries in India.
- 7. Write notes on any two:
  - a) Geographical location of India
  - b) Conservation of forest
  - c) Regional development of Sourashtra.



### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY (2005 Pattern)

#### **Gg-443**: Regional Geography of a Meso Region-North America (Old)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of soil and vegetation of North America.
- 2. Describe problems and prospects of industrialization in North America.
- 3. Explain population resources in North America.
- 4. How irrigation plays an important role in agriculture of North America? Explain.
- 5. Explain globalization with respect to development of transportation in North America.
- 6. Discuss the development of megalopolis in North America.
- 7. Write notes on **any two**:
  - i) Importance of tourism in North America
  - ii) Involvement in military organization
  - iii) Ethnic diversion.



### M.A./M.Sc. (Sem.–I) Examination, 2011 GEOGRAPHY Gg-101: Principles of Geomorphology (2008 Pattern)

Time: 3 Hours Max. Marks: 80

- **N.B:** i) Attempt **any four** questions.
  - ii) All questions carry equal marks.
  - iii) Draw figures/maps wherever necessary.
  - iv) Use of map stencils is allowed.
- 1. Define geomorphology. Give a review of historical development of geomorphology.
- 2. Critically examine Wegener's continental drift theory.
- 3. Define and compare different denudational processes.
- 4. Give the details of different erosional land forms formed by the work of rivers.
- 5. Explain the work of waves and tides in coastal environment.
- 6. Give a brief account of slope morphology.
- 7. Write notes on **any two**:
  - a) Mechanism of wind erosion.
  - b) The concept of peneplanation.
  - c) Palaeomagnetism.



### M.A./M.Sc. (Sem. – I) Examination, 2011 GEOGRAPHY Gg-102: Principles of Climatology (2008 Pattern)

Time: 3 Hours Max. Marks: 80

- **N.B:** 1) Attempt **any four** questions.
  - 2) All questions carry equal marks.
  - 3) Use of map stencils is allowed.
- 1. State the difference between heat and temperature, and explain the factors that control horizontal distribution of temperature over the earth's surface.
- 2. Describe in short various scales of atmospheric motions. Discuss in detail the tri-cellular theory of atmospheric motion.
- 3. What is an air mass? Which are the major air mass source regions? Write an elaborative note on the types of air mass modifications.
- 4. Mention the major gases that constitute atmosphere. Construct a vertical profile of atmosphere showing temperature changes in different layers and describe the characteristics of each layer in detail.
- 5. What is atmospheric pressure? Explain geostrophic and gradient wind.
- 6. Discuss the effect of atmosphere on incoming solar radiation.
- 7. Write notes on any two.
  - A. Development of modern climatology.
  - B. Conditional instability.
  - C. Jet stream.



#### **Gg-103**: Principles of Economic Geography (2008 Pattern)

Time: 3 Hours Max. Marks: 80

- **N.B.**: i) Attempt any four questions.
  - ii) All questions carry equal marks.
  - iii) Draw figures/maps wherever necessary.
  - iv) Use of map stencils is allowed.
- 1. Define economic geography and explain its scope.
- 2. Explain how the cost of transportation affects the location of industrial activity.
- 3. Explain the significance of natural resources in the economic development of a country.
- 4. "Land, labour and capital are the basic factors of production". Discuss.
- 5. Explain the various measures of economic development giving suitable examples.
- 6. Trace out the post independence history of economic development in India.
- 7. Write notes on any two:
  - a) Types of hypothesis.
  - b) External economies of scale
  - c) Ricardo's classical theory.



# **Gg – 104 : Principles of Settlement and Population Geography** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of evolution of settlement geography.
- 2. Describe the physical factors affecting growth and distribution of settlements.
- 3. Describe the factors responsible for nucleation of settlements.
- 4. Critically examine the Christaller theory of settlements.
- 5. Explain the Demographic Transition model and its applicability to India's population growth.
- 6. Write an essay on 'population as a resource'.
- 7. Write notes on **any two**:
  - a) Methods of measuring degree of dispersion.
  - b) Approaches to the study of settlement geography.
  - c) Level of urbanization.



### M.A./M.Sc. (Semester – I) Examination, 2011 GEOGRAPHY Gg-102: Principles of Climatology (2004 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Distinguish between weather and climate and describe the scope of climatology.
- 2. Describe physical properties and chemical composition of earth's surface.
- 3. Define Electromagnetic Spectrum and describe factors affecting insolution.
- 4. How do you differentiate between heat and temperature and describe horizontal and vertical distribution of temperature.
- 5. Explain various factors affecting wind system of the earth's surface.
- 6. Give an account of global circulation of the atmosphere.
- 7. Write notes on any two:
  - i) Instability of atmosphere
  - ii) Types of air masses
  - iii) Methods of weather forecasting.

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### **Gg-201 : Quantitative Techniques in Geography** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**N.B.** : 1) Attempt **any four** questions.

- 2) Use of calculator and statistical table are allowed.
- 3) The figures in the **right** hand side **bracket** indicate **full** marks.
- 1. a) Write a short note on spatial and temporal data.

(6)

b) Calculate standard deviation and variance for the following data. The table shows frequency of annual rainfall at Varanasi, 1901-1950. (14)

Class	35-79	79-123	123-167	167-211	211-255
Frequency	7	20	11	11	1

2. a) Write a note on Kurtosis.

**(6)** 

- b) It is observed that, very large flood on record of the Godavari River at Dowleshwaram is 1 in 100 years. What is probability that in 20 years? (14)
  - a) 2 very large floods will occur.
  - b) less than 2 very large floods willl occur.
- 3. a) Describe the Normal Probability Distribution.

**(6)** 

b) Calculate 3 and 5 year moving averages for the annual peak discharge of the Narmada River. Plot the data and comment. (14)

Year	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Discharge	11	14	20	35	20	11	24	12	30	20
Year	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Discharge	55	30	16	22	18	11	20	30	26	41

(Discharge in  $10^3 \text{m}^3/\text{s}$ )



4. a) Write properties of Least-Squares Method.

**(6)** 

b) Calculate the correlation coefficient (r) between the agricultural land in acres and yield of an area. Test the level of significance at 0.05 and interpret the value. (14)

Land (Acres)	125	80	4	91	39	30	6	35	100	132
Yield (1000 Kg)	118	73	3	53	35	27	4	33	50	119

5. a) Describe concept of residuals and explained variance.

**(6)** 

b) Two set of samples, X and Y are given below regarding soil moisture content in two areas of a forest. Apply the student 't' test. Test the hypothesis at 0.05 level of significance to know whether the samples are taken from a common population. (14)

X	14	12	13	10	7	6	4	-	-
Y	18	16	15	14	19	7	8	6	3

6. As a part of a biogeographical study soil samples were taken from three different areas of forest. Laboratory analysis shows that the water holding capacity of the samples is as follows. (20)

Area A	72	58	42	85	81	64	71	68	64	73
Area B	36	36	03	48	43	15	44	60	1	1
Area C	54	57	93	64	82	34	-	-	-	-

Use the 'F' test to establish whether there is significant difference in water holding capacity between the three areas at 0.05 level.

7. Write notes on any two:

(20)

- 1) Nominal and ordinal scales of measurement
- 2) Meaning and description of median.
- 3) Binomial probability distribution.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg 210 : Tropical Geomorphology (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) **All** questions carry **equal** marks.

- 2) Attempt any four questions.
- 3) Use of calculator and statistical table is **allowed**.
- 1. Discuss the climatic and environmental factors of the tropical environment.
- 2. Give properties and world distribution of indurated laterite.
- 3. Explain the types and processes of mass movement in the tropics.
- 4. Discuss the nature of Domed and Boulder inselbergs in the tropics.
- 5. Define planation surface and give an account of double surface of planation.
- 6. Give an account of change in climate and vegetation in Quaternary period.
- 7. Write notes on **any two**:
  - a) Classification of tropics.
  - b) Process of soil formation in the tropics.
  - c) Landform development in lateritic terrain.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg – 213: Population Geography (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define population geography and explain its relation with other disciplines.
- 2. Give an account of population growth during different period of human history.
- 3. Critically examine the optimum population theory.
- 4. Describe the fertility differences with reference to educational and urban-rural status.
- 5. Define migration. Explain various types of migration in detail.
- 6. Explain the importance of population projections in regional and urban development planning.
- 7. Write notes on any two:
  - a) Malthus population theory.
  - b) Foetal and Infant mortality.
  - c) Literacy and economic composition of population.

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### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg-214: Geoinformatics – I (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define GIS and explain major GIS tasks giving suitable examples.
- 2. Describe spatial and non-spatial database in GIS.
- 3. Give a comparative overview of raster and vector data models in GIS.
- 4. What is DBMS? Explain hierarchical, network and relational models in DBMS.
- 5. Give an account of attribute databases in GIS.
- 6. Explain local and focal grid operations as spatial databases in GIS.
- 7. Write notes on any two:
  - i) Potential of GIS
  - ii) SQL-spatial query
  - iii) Layers and coverage.



### M.A./M.Sc. (Semester – II) Examination, 2011 GEOGRAPHY Gg-210: Tropical Geomorphology (2005 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Discuss the effects of climatic parameters on the tropical environment.
- 2. Discuss the factors affecting chemical weathering in the tropical environment.
- 3. Describe the landforms associated with lateritic terrain and give the distribution of laterite in India.
- 4. Explain the process of erosion and deposition in tropical rivers.
- 5. Discuss the nature of tropical terrain with respect to relief characteristics and hillslopes.
- 6. Describe the formation of peneplains and pediplains in the tropics.
- 7. Write note on **any two**:
  - i) Solubility and mobility of minerals in tropics.
  - ii) Mass movements in tropics.
  - iii) Quarternary change in climate and vegetation.



**Gg – 301 : Theoretical and Applied Geography (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**:1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Explain the significance of remote sensing and GIS in the study of geography.
- 2. Explain the application of geographical concepts and techniques in landuse and regional planning.
- 3. Give a brief account of German and American schools of thought to the development of geographical thought.
- 4. Describe the contribution of Herodotus and Eratosthenes in the development of geographical thought.
- 5. Examine the concept of dualism with reference to systematic versus regional geography.
- 6. Discuss the significance of theories and laws in the study of geography.
- 7. Write notes on **any two**:
  - a) Contribution of strabo in development of geographical thought.
  - b) System approach in geography.
  - c) Dichotomies in geography.



### M.A./M.Sc. (Sem. – III) Examination, 2011 GEOGRAPHY (Special Paper – I) Gg-310: Coastal Geomorphology (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

- **N.B.** 1) Attempt any four questions.
  - 2) All questions carry equal marks.
  - 3) Use of map stencils is allowed.
- 1. Distinguish between genetic and morphological coastal classification giving suitable examples.
- 2. Define wave and describe various parameters of waves.
- 3. Give an explanatory account of tides and coastal landforms.
- 4. Give a brief review of Pleistocene sea levels, glacial eustasy and staircase theory.
- 5. Describe grain size characteristics of coastal sediments and explain properties of clastic and biogenic sediments.
- 6. Give an account of fluvial dominated coasts giving suitable examples.
- 7. Write notes on any two:
  - a) Spatial and temporal scales in coastal geomorphology.
  - b) Esturies reclamation.
  - c) Coastal erosion.



### M.A./M.Sc. (Sem. – III) Examination, 2011 GEOGRAPHY (Special Paper – I) Gg-311: Applied Climatology (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

- **N.B**: 1) Attempt any four questions.
  - 2) All questions carry equal marks.
  - 3) Use of map stencils is allowed.
- 1. Discuss the effect of temperature, rainfall and evapotranspiration on crop productivity.
- 2. Explain different direct and indirect methods used to measure evapotranspiration.
- 3. Explain various radiation laws and describe at least two instruments used to measure radiation.
- 4. What is Clear Air Turbulence (CAT) ? How does it affect air transport? Also describe other climatic factors that affect air transport.
- 5. Why do urban heat island occur? Write a detailed note on the nature of urban climates.
- 6. Elaborate the influence of climate on human health and clothing.
- 7. Write notes on any two.
  - A. Astronomical theory of climate change.
  - B. Use of satellites for crop monitoring.
  - C. Climate and commercial activities.



### M.A./M.Sc.( Sem. – III) Examination, 2011 GEOGRAPHY (Special Paper – I) Gg-312: Trade and Transport Geography (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Explain the significance of transportation in the world and regional economies.
- 2. Describe the characteristics and relative significance of railways and roadways.
- 3. Describe the various models of network changes.
- 4. Describe the various types of trade in details.
- 5. Describe the theory of comparative advantage.
- 6. Give a brief account of developmental history of international trade.
- 7. Write short notes on any two.
  - a) Nodes and routes.
  - b) Traffic flow.
  - c) Significance of trade.



### M.A./M.Sc. (Semester – III) Examination, 2011 GEOGRAPHY (Special Paper – I) Gg-314 : Geoinformatics – III (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: i) Attempt **any four** questions.

- ii) All questions carry equal marks.
- iii) Use of map stencil and calculator is allowed.
- 1. What do you understand by grid operations in spatial analysis? Explain local, focal, zonal and global grid operations with suitable examples.
- 2. What is spatial interpolation? Explain various methods of interpolation giving suitable examples.
- 3. Give an account of spatial modelling.
- 4. Discuss various sources of distortions in acquisition of satellite data.
- 5. Explain unsupervised classification with reference to ISODATA approach.
- 6. What is confusion matrix? Explain user's accuracy and mapping accuracy with examples.
- 7. Write notes on any two:
  - a) Parallel piped and MXL classifiers.
  - b) Thermal RS.

c)	Temporal resolution.	



### M.A./M.Sc. (Semester – III) Examination, 2011 GEOGRAPHY (Special Paper – II) Gg-321: Political Geography (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Describe in detail 'Whittlesey's law' and landscape approach and bring out its limitations.
- 2. Define the Nation and describe its elements and characteristics.
- 3. Explain the global strategic view of Mahan and Cohen.
- 4. Classify the resources and explain the relationship between resources and national strategy.
- 5. Discuss the problems of border states of India.
- 6. Give an account of changing political map of India.
- 7. Write notes on any two:
  - a) Scope of political geography.
  - b) Genetic classification of boundaries.
  - c) Emergence of new states.



### M.A./M.Sc. (Semester – III) Examination, 2011 GEOGRAPHY (Special Paper – II) Gg-322 : Soil Geography (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**N.B.**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Draw figures/maps wherever necessary.
- 4) Use of map stencils is allowed.
- 1. Explain the importance of the study of soil in different branches of Geography.
- 2. Elaborate the different factors affecting soil formation process.
- 3. Describe physical properties of the soil with reference to texture, structure, colour and porosity.
- 4. Define soil profile and explain the process of development of soil profile.
- 5. Give an account of land suitability classification.
- 6. Write an explanatory note on problems related to soil degradation with special reference to salinization and acidification.
- 7. Write notes on any two:
  - a) Productivity of soil
  - b) Soil biomass
  - c) Incorrect methods of farming.

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**Gg-224 : Geoinformatics (Paper – II)** (2005 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. What do you understand by primary and secondary data sources? Explain the major sources of publishing data, reports and maps in India for environmental planning and management.
- 2. Define the term spectral signature and describe the factors that determine the spectral reflectance of soil, vegetation and water.
- 3. Bring out the significance of spectral bands in RS studies and explain their relation with atmospheric windows.
- 4. Describe spectral, spatial, radiometric and temporal characteristics of satellite images and an aerial photograph.
- 5. Give a broad outline of IRS data products.
- 6. Outline major fundamental concepts of GPS with respects to space segment, control segment and user segment.
- 7. Write notes on **any two**:
  - i) Laws of radiation
  - ii) LISS
  - iii) Measurement of scale and height on Aerial photographs.



# **Gg-421 : Geography of Water Resources (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of distribution of worlds surface water resources with respect to glaciers and ice caps.
- 2. Describe various components of hydrological cycle.
- 3. Discuss various utilization and estimation methods of water resources.
- 4. Give an account of industrial demand for water and its utilization.
- 5. Outline the major problems associated with water resources.
- 6. Discuss 'Integrated basin planning' as a useful methodology in conservation planning.
- 7. Write notes on any two:
  - a) Afforestation.
  - b) Water pollution and treatment.
  - c) India's water treaty.

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**Gg-422 : Biogeography (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) **All** questions carry **equal** marks.

- 2) Attempt any four questions.
- 3) Use of map stencils is allowed.
- 1. Write a note on history of the biogeography as a discipline.
- 2. Give a brief account of floral kingdom in biogeography.
- 3. Explain the concept of evolution and adaptation as basic processes in biogeography.
- 4. Discuss how biome and life forms are physical limitation of life.
- 5. Explain the relationship between changing patterns of continents and ancient patterns in distribution of plants and animals.
- 6. Describe the features of evergreen forest as a major biome of the world.
- 7. Write notes on any two:
  - i) Relevance of biogeography
  - ii) Relict
  - iii) Microclimates.



### **Gg-423 : Geography of Ecosystem (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. 'Geography as a human ecology' Discuss.
- 2. Describe biotic components of an ecosystem and explain energy transfer at each trophic level giving suitable examples.
- 3. What do you understand by terrestrial ecosystems? Explain grassland and desert ecosystems of the world.
- 4. Give an account of land resources and world food security.
- 5. Bring out the man-environment relationship with respect to exploitation of resources.
- 6. Bring out the significance of resource management for preservation and conservation of ecosystems.
- 7. Write notes on any two:
  - a) Ecology of Sardar sarovar.
  - b) Carbon dioxide and phosphorous cycle.

c)	Food	chains	and	food	web.		



#### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY Gg – 430 : Social and Cultural Geography (New) (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Define social and cultural geography and explain various approaches to the study of social and cultural geography.
- 2. Explain Positivism, Humanism, Idealism and Radicalism in social and cultural geography.
- 3. Describe various individual's space, structure and processes of social patterns.
- 4. Explain the concepts of industrialization, migration, urbanization, modernization and globalization.
- 5. Give a brief account of cultural regions of the world.
- 6. Describe rural-urban contrast in housing, health, education, social and cultural characteristics of human settlements.
- 7. Write notes on any two:
  - a) Sailent features of human development index.
  - b) Basic components of social well-being.
  - c) Methods of measuring well-being by weighing indicators.



**Gg-431 : Computer Geography (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) **All** questions carry **equal** marks.

- 2) Attempt any four questions.
- 3) Use of calculator and statistical table is allowed.
- 1. Discuss the application of computers in Human Geography.
- 2. Explain in detail an anatomy of computers.
- 3. Discuss the application of paint in creating maps and editing function.
- 4. Explain the role of Auto CAD and GIS in map making.
- 5. What is GIS? Explain its uses in geographical studies.
- 6. Write an account of function of MS-EXCEL in graphical presentation.
- 7. Write notes on **any two**:
  - a) Significance of Coral Draw in map making.
  - b) Procedure of accessing icon and files in windows.
  - c) Computer cartography.



#### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY (2005 Pattern)

**Gg – 401 : Natural Resource Management (Old)** 

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Elaborate the concepts and models of natural resource management.
- 2. What is conservation? Explain the methods of conservation of natural resources.
- 3. Examine the prospects of mineral and water resources in India.
- 4. Explain the role of policy models towards better management and conservation of resources.
- 5. Explain the concept of sustainable resource management.
- 6. Give an account of water resources in India and their development policies.
- 7. Write notes on any two:
  - i) Natural hazards.
  - ii) Use and misuse of resources.
  - iii) Use of remote sensing in resource appraisal.

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### **Gg-433 : Natural and Manmade Hazards (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. What are natural hazards? Explain the various types of natural hazards.
- 2. Discuss the causes and effects of droughts.
- 3. Explain the factors contributing to man-made hazards.
- 4. Explain the causes and effects of landslides.
- 5. Discuss the world population growth and its impact on biodiversity.
- 6. Discuss the effects of global warming and ozone depletion.
- 7. Write notes on **any two**:
  - a) Preparedness for disaster
  - b) Effects of tsunami
  - c) Causes of desertification.



### **Gg-442 : Regional Geography of South East Asia (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: i) Attempt **any four** questions.

- ii) All questions carry equal marks.
- iii) Use of map stencils is allowed.
- 1. Write a geographical essay on 'Location and significance of South East Asia'.
- 2. Describe salient features of agriculture in South East Asia.
- 3. Explain major industries and their distribution in South East Asia.
- 4. Write an essay on an international trade in South East Asia.
- 5. Explain the growth and distribution of settlements in South East Asia.
- 6. Explain modern economic policy of Malaysia (Liberalization) and its advantages and disadvantages.
- 7. Write notes on any two:
  - i) Plantation agriculture in South East Asia.
  - ii) Urbanization.

iii) Scope of tourism

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# **Gg-443 : Regional Geography of North America (New)** (2008 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions:** i) Attempt **any four** questions.

- ii) All questions carry equal marks.
- iii) Use of map stencils is allowed.
- 1. Bring out the salient features of location and geostrategic importance of North America.
- 2. Give an account of water and land resources in North America.
- 3. Mention agricultural regions of North America and describe any one of them in detail.
- 4. Write a geographical account of international trade of North America.
- 5. 'The economic power is based on population resources of North America'. Comment.
- 6. Write an essay on the development of tourism in North America.
- 7. Write notes on any two:
  - i) Western cordilerra.
  - ii) Cotton textile industry.
  - iii) U.S.A. and Canada relationship.



### **Gg-420 : Regional Planning and Development (Old) 2005 Pattern**

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. What is a concept of region? Explain the concept of space, area and location attribute.
- 2. Discuss in detail Uniform and Nodal region with examples.
- 3. Examine importance of command area development in regional development.
- 4. Discuss 'development of hilly area region as a special purpose Region'.
- 5. Describe the development strategies in plans of developed countries with reference to regional concentration and dispersion.
- 6. Explain the role of regional planning in India with reference to desert land and wet land area development.
- 7. Write notes on any two:
  - i) Changing concept of a region.
  - ii) Long term perspective in planning.
  - iii) Block level Plans.



# M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY (2005 Pottorn)

**(2005 Pattern)** 

**Gg-421 : Geography of Water Resources (Old)** 

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Explain how water as a focus of geographical interest?
- 2. Describe various components of hydrological cycle with quantitative estimates and water storages.
- 3. Bring out relationship between water balance and drought and also explain water conservation methods.
- 4. Explain how 'wrong irrigation practices' lead to various environmental problems?
- 5. Explain in detail the industrial and urban water uses in India.
- 6. Discuss different case studies of major floods in Bangladesh with respect to damage and losses.
- 7. Write notes on any two:
  - i) Integrated basin planning
  - ii) Ground water

iii)	Drought prone	areas o	of Mahara	ashtra.
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Gg. 422: Biogeography (2005 Pattern) (Old)

Time: 3 Hours Max. Marks: 80

**N.B.**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give an account of basic biographic patterns.
- 2. Describe distributional patterns of biodiversity.
- 3. Describe in brief various ecosystems.
- 4. Discuss the variety of island habitats.
- 5. Describe ancient distributional pattern of plant and animal.
- 6. Describe the biomass of Tundra and Taiga.
- 7. Write notes (any two):
  - i) Idea of continental drift.
  - ii) Altitudinal zonation.
  - iii) Climate as a physical limitation of life.

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#### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY Gg.423 : Geography of Ecosystem (2005 Pattern) (Old)

Time: 3 Hours Max. Marks: 80

**N.B.**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Describe in brief abiotic and biotic components of ecosystem.
- 2. Explain the terms pyramid of energy, food chain and food webs.
- 3. Discuss the impact of population growth on environment.
- 4. Discuss the consequences of over utilization of forest and energy resources.
- 5. Explain the impact of human activities on ecological change.
- 6. Give a brief account of Earth Summit on environmental protection.
- 7. Write notes (any two):
  - i) Ecological niche
  - ii) Grassland ecosystem
  - iii) Biodiversity.



#### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY Gg- 430 : Social and Cultural Geography (Old) (2005 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**:1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Explain various cultural regions of India.
- 2. Explain different approaches, trends and development of social and cultural geography.
- 3. Describe the concepts of Humanism, existentialism, phenomenalism, structuralism and existentialism.
- 4. Describe various cultural groups of the World.
- 5. Give an account of interaction and social relations in the process of social patterns.
- 6. Explain various contrast characteristics of rural and urban settlement.
- 7. Write notes on **any two**:
  - i) Social and Physical infrastructure in Human settlements.
  - ii) Social Justice.
  - iii) Socio-cultural indicators of social well being.



# **Gg-431 : Computer Geography (Old)** (2005 Pattern)

Time: 3 Hours Max. Marks: 80

Instructions: 1) All questions carry equal marks.

- 2) Attempt any four questions.
- 3) **Use** of calculator and statistical table is **allowed**.
- 1. Discuss in detail the input output devices of computer.
- 2. Write a program in Q BASIC to find the standard deviation.
- 3. Write Q BASIC program to obtain correlation if 10 observations of X and Y are given.
- 4. Describe how mathematical and statistical functions are used in Excel, giving suitable examples.
- 5. Illustrate with examples how to construct line graph, composite bar graph and pie charts using MS Excel.
- 6. Explain how will you carry out the regression analysis using Excel spreadsheet for a hypothetical examples.
- 7. Write notes on any two:
  - i) Anatomy of Computers
  - ii) Search Engines
  - iii) Application of Computer in Geography.

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Max. Marks: 80



Time: 3 Hours

#### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY (2005 Pattern) Gg - 433: Natural and Man made Hazards (Old)

**Instructions**: 1) Attempt **any four** questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Give a brief account of climatic hazards.
- 2. Discuss the causes and effects of 'Tsunamies'.
- 3. Describe the causes and effects of soil erosion.
- 4. Explain the influence of large river project with reference to Tehari dam.
- 5. Give an account of world population growth and its impact on biodiversity.
- 6. Discuss the causes and effects of ozone depletion.
- 7. Write notes (any two):
  - i) Causes and effects of flood.
  - ii) Causes and areas affected by droughts in India.
  - iii) Types of natural hazards.



### **Gg-441 : Regional Geography of a Meso Region-Europe (Old)** (2005 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**:1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Describe relief and drainage characteristics of Europe.
- 2. Explain various problems and prospects of agriculture of Europe.
- 3. Discuss the trading partners memberships of international trade treaties of Europe.
- 4. Write an essay on population composition of Europe.
- 5. Give an account of development of tourism and major tourist centres of Europe.
- 6. Give an account of industrial revolution and European common market in Europe.
- 7. Write notes on any two:
  - i) Development of megalopolis in Europe.
  - ii) Geostrategic importance of Europe.
  - iii) Problems of urbanization in Europe.



### **Gg-442 : Regional Geography of a Meso Region-South Asia (Old)** (2005 Pattern)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Describe geological structure and relief of South Asia.
- 2. Give an account of water, land and mineral resources of South Asia.
- 3. Discuss various problems and prospects of industrialization of South Asia.
- 4. Define Urbanization and explain development of megalopolis in South Asia.
- 5. Give an account of military regime in Myanmar.
- 6. Explain the scope of tourism and major tourist centres of South Asia.
- 7. Write notes on **any two**:
  - i) Growth and distribution of population of South Asia.
  - ii) Age and Sex structure of population in South Asia
  - iii) Geostrategic importance of South Asia.



#### M.A./M.Sc. (Semester – IV) Examination, 2011 GEOGRAPHY (2005 Pattern)

**Gg-444**: Geography of Japan (Old)

Time: 3 Hours Max. Marks: 80

**Instructions**: 1) Attempt any four questions.

- 2) All questions carry equal marks.
- 3) Use of map stencils is allowed.
- 1. Describe the distribution of major soil types in Japan.
- 2. Discuss the distribution of minerals in Japan.
- 3. Describe the salient features of agricultural and its changing scenario in Japan.
- 4. Describe historical evolution of industries in Japan.
- 5. Describe the factors affecting international trade of Japan.
- 6. Describe the composition of population in Japan.
- 7. Write notes on **any two**:
  - i) Geographical location of Japan
  - ii) International trade policies of Japan
  - iii) Urbanization in Japan.