[5128]-101

M.A/M.Sc.

GEOGRAPHY

Gg:101: Principles of Geomorphology

(2013 Pattern) (Credit System) (Semester-I)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) *Attempt any three questions from question number 1 to 6.*

2) *Question number 7 and 8 are compulsory.*

3) *Figures to the right indicate full marks.*

4) *Draw figures/maps wherever necessary.*

5) *Use of map, stencils and calculator is allowed.*

Q1) a) Define Geomorphology. **[2]**

b) Explain the term catastrophism. **[4]**

c) Write a note on spatial scale in geomorphology. **[4]**

Q2) a) What do you mean by gravity anamoly? **[2]**

b) Explain views of Airy on Isostacy. **[4]**

c) Explain the concept of sea floor spreading. **[4]**

Q3) a) What is mass movement? **[2]**

b) Explain any two evidences of Wegener's Continental Drift Theory. **[4]**

c) Explain chemical weathering in short. **[4]**

Q4) a) Define drainage basin. **[2]**

b) Explain the mechanism of erosion and deposition by rivers. **[4]**

c) Explain the concept of peneplanation. **[4]**

Q5) a) What do you mean by cirques? **[2]**

b) Explain any two depositional landforms formed by glaciers. **[4]**

c) Discuss the types of plate boundaries. **[4]**

Q6) a) What is playa? **[2]**

b) Explain any two landforms produced by water in the deserts. **[4]**

c) Give the mechanism of transportation by wind in arid regions. **[4]**

Q7) a) Write a note on mechanism of erosion by sea waves. **[5]**

b) Give different depositional landforms produced by sea waves. **[5]**

Q8) a) Explain different segments of slope profile. **[5]**

b) Explain in short slope replacement. **[5]**

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[5128]-102

M.A. / M.Sc.

GEOGRAPHY

Gg - 102 : Principles of Climatology

(2013 Pattern) (Credit System) (Semester - I)

Time : 3 Hours]   *[Max. Marks : 50*

Instructions to the candidates:
1)   *Attempt any three questions from 1 to 6.*
2)   *Question number 7 & 8 are compulsory.*
3)   *Figures to the right indicate full marks.*
4)   *Use of map stencils is allowed.*

Q1) a)   Differentiate between Weather and Climate.   **[2]**

b)   Describe the elements of weather and climate in brief.   **[4]**

c)   Discuss the development of modern Climatology.   **[4]**

Q2) a)   What do you mean by composition of the atmosphere?   **[2]**

b)   Discuss the physical composition of the atmosphere?   **[4]**

c)   Explain the structure of the atmosphere in brief.   **[4]**

Q3) a)   What is incoming solar radiation?   **[2]**

b)   Explain the effect of latitude and seasons on insolation.   **[4]**

c)   Explain the various effects of atmosphere on insolation.   **[4]**

Q4) a)   What is the difference between heat and temperature?   **[2]**

b)   How does the distance from the coast affect temperature?   **[4]**

c)   Explain horizontal temperature distribution over the surface of the earth.**[4]**

Q5) a) What is a atmospheric pressure? **[2]**

b) Describe the various methods of pressure measurement. **[4]**

c) Explain geostrophic and gradient winds. **[4]**

Q6) a) What is humidity? **[2]**

b) How is humidity measured? **[4]**

c) Explain the factors affecting evaporation. **[4]**

Q7) a) Discuss the local winds. **[5]**

b) Explain the conditional instability of the atmosphere. **[5]**

Q8) a) Classify air masses based on source regions and give their characteristics. **[5]**

b) Discuss the methods of weather forecasting. **[5]**

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[5128]-103

M.A./M.Sc.

GEOGRAPHY

Gg- 103: Principles Of Economic Geography

(2013 Pattern) (Credit System) (Semester - I)

Time : 3 Hours]   *[Max. Marks : 50*

Instructions to the candidates:
1) *Attempt any three questions from Question number 1 to 6.*
2) *Question number 7 and 8 are compulsory.*
3) *Figures to the right indicate marks.*
4) *Use of map stencil and calculator is allowed.*

Q1) a)   Define economic landscape.   **[2]**

b)   Discuss the modern economic landscape.   **[4]**

c)   Explain Weber's model of Industrial location.   **[4]**

Q2) a)   What do you mean by resource?   **[2]**

b)   How are the resources classified?   **[4]**

c)   Discuss the role of human resources in economic development.   **[4]**

Q3) a)   What is an economic activity?   **[2]**

b)   Discuss the significance of land and labour in economic activities.   **[4]**

c)   Explain the internal economies of scale.   **[4]**

Q4) a)   Explain the concept of economic development.   **[2]**

b)   How are the countries classified according to economic development?   **[4]**

c)   Explain Rostow's model of economic development.   **[4]**

Q5) a) What is international trade? [2]

b) Discuss the structure of international trade. [4]

c) Explain Ricardo's Classical Theory of International Trade. [4]

Q6) a) What is green revolution? [2]

b) Discuss the impact of green revolution on economic development of India. [4]

c) Give a brief history of economic development in India. [4]

Q7) a) Explain the nature of study of economic geography. [5]

b) Give the recent trends in economic geography. [5]

Q8) a) Explain the types of hypothesis. [5]

b) Discuss the formation of hypothesis in economic geography. [5]

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[5128]-104

M.A./M.Sc.

GEOGRAPHY

Gg - 104 : Principles of Population and Settlement Geography
(2013 Pattern) (Semester - I) (Credit System)

Time : 3 Hours]   *[Max. Marks : 50*

Instructions to the candidates:
   1)   *Attempt any three questions from question number 1 to 6.*
   2)   *Question number 7 and 8 are compulsory.*
   3)   *Figures to the right indicate full marks.*
   4)   *Use of map stencils is allowed.*

Q1) a)   Explain the system approach to the study of population geography. **[2]**

     b)   Describe the evolution of population geography.   **[4]**

     c)   Describe the social factors influencing distribution of settlements.   **[4]**

Q2) a)   What is nucleation?   **[2]**

     b)   Explain the methods of measuring degree of dispersion.   **[4]**

     c)   Describe the social factors influencing the nucleation of settlements. **[4]**

Q3) a)   Enlist the economic factors influencing population distribution.   **[2]**

     b)   Describe the social factors influencing population distribution   **[4]**

     c)   Explain the factors related to urban growth.   **[4]**

Q4) a)   Explain the genetic approach to the study of settlement geography. **[2]**

     b)   Describe the physical factors influencing the growth of settlements. **[4]**

     c)   Describe the patterns of settlement.   **[4]**

Q5) a)   What is centrality?   **[2]**

     b)   Describe Losch's model.   **[4]**

     c)   Discuss the postulates of christaller's model.   **[4]**

Q6) a) Explain the concept of range. **[2]**

b) Explain the nearest neighbour method as a measure of degree of dispersion. **[4]**

c) Describe the role of transportation and communication in urban growth. **[4]**

Q7) a) Describe the Demographic Transition model. **[5]**

b) Explain any two aspects of population as a resource. **[5]**

Q8) a) Describe the economic factors influencing the nucleation of settlements. **[5]**

b) Explain the social factors related to dispersion of settlements. **[5]**

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[5128]-201
M.A./M.Sc.
GEOGRAPHY
Gg - 201 : Quantitative Techniques in Geography
(2013 Pattern) (Credit System) (Semester - II)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:
1) *Attempt any two quesitons from Q.1 to Q.4.*
2) *Questions 5 and 6 are compulsory.*
3) *Figures to the right side indicate full marks.*
4) *Use of statistical tables and Calculator is allowed*

Q1) a) What do you mean by nominal and ordinal scale? **[2]**

b) Calculate mean and standard deviation for the following data. **[4]**

Classes	51-100	101-150	151-200	201-250	251-300
f	4	7	8	6	4

Classes	301-350	351-400	401-450	451-500	501-550
f	12	10	11	2	3

c) Calculate kurtosis for the data provided in Q.1 b. **[4]**

Q2) a) State the use of poisson distribution in geography. **[2]**

b) The probability of the mean temperature in summer at a station being less than 35°C and more than 25°C is 0.79584. The probability of temperature being less than 25°C is 0.02275. Assuming the distribution to be normal obtain the values of mean and standard deviation. **[4]**

c) It is observed that 30% plants in a farm are affected by pests. Find the probability that if a sample of 7 plants are selected at random, it will have: **[4]**

i) No plants affected.

ii) Less than 3 plants affected.

Q3) a) Explain the concept of bivariate regression. **[2]**

b) Calculate the Pearson product moment correlation coefficient (r) between angle of slope in degrees and depth of soil in m. Interpret the results.**[4]**

Slope(X)	2	4	6	7	8	10	12	15	18
Depth (Y)	5.1	4.5	4.3	3.5	3	2.6	2.3	1.8	1.3

c) Obtain a simple linear regression equation for the data given in Q.3 b.**[4]**

Q4) a) Explain poisson probability distribution. **[2]**

b) Calculate standard error of the mean for the variable 'X' given in the following table. **[4]**

X	3	5	4	3	2

c) Calculate standard error of the standard deviation for the variable 'X' given in Q.4 b. **[4]**

Q5) a) Apply Chi Square test for the given data to test the hypothesis that there is no relation between landforms and storm intensity. **[5]**

Landforms	Storm intensity		
	Severe	Moderate	Low
Plains	35	63	29
Plateau	28	29	21
Mountains	58	106	52

b) From the result obtained in Q.5a test the hypothesis at 0.05 and 0.01 level of significance and interpret the same. **[4]**

Q6) a) Calculate 5 years moving average for the annual rainfall data of a station.**[5]**

Year	1980	1981	1982	1983	1984	1985	1986	1987
R.F.(cm)	109	110	92	82	83	105	121	119

Year	1988	1989	1990	1991	1992	1993	1994	1995
R.F.(cm)	109	112	89	105	87	104	98	120

b) Write a note on students 't' test. **[4]**

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[5128]-202

M.A. / M.Sc.
GEOGRAPHY
Gg - 210 : Coastal Geomorphology
(2013 Pattern) (Semester - II)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:
  1) *Attempt any two questions from Q.1 to Q. 4.*
  2) *Question 5 and 6 are compulsory.*
  3) *Draw figures / Maps wherever necessary.*
  4) *Figures to the right indicate full marks.*
  5) *Use of map stencils and calculator is allowed.*

Q1) a) What is temporal scale in coastal geomorphology?   **[2]**

  b) Write a note on co-tidal lines.   **[4]**

  c) Write a note rip current.   **[4]**

Q2) a) Define spilling and surging breakers.   **[2]**

  b) Explain the process of wave refraction.   **[4]**

  c) Explain the relative and eustatic sea level changes.   **[4]**

Q3) a) What is spring and neap tides?   **[2]**

  b) Write a note on fossil beach ridge.   **[4]**

  c) Explain the formation and morphology of sea cliffs and caves. **[4]**

Q4) a) What do you mean by salt marshes?   **[2]**

  b) Write a note on morphodynamics of deltas.   **[4]**

  c) Explain the estuarine hydrodynamics and mud flat morphology. **[4]**

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Q5) a) Write an explanatory note on genetic classification of coast. **[4]**

b) Explain properties of clastic and biogenic sediments. **[5]**

Q6) a) What is a shore platform? Explain its morphology and formation. **[4]**

b) Give an account of Kharland reclamation. **[5]**

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[5128]-203

M.A. / M.Sc.

GEOGRAPHY

Gg - 211 : Synoptic Climatology

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours] *[Max. Marks : 38*

Instructions to the candidates:
1) *Attempt any two questions from Question no. 1 to 4.*
2) *Question no. 5 and 6 are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Use of map stencils is allowed.*

Q1) a) What do you mean by tropical cyclones? **[2]**

b) Describe the stages of development of thunderstorms. **[4]**

c) Explain the collecting system of weather data through India Meteorological Services. **[4]**

Q2) a) Define Synoptic climatology. **[2]**

b) Explain the prediction of Tornados. **[4]**

c) Explain the displaying system of weather data by India meteorological services. **[4]**

Q3) a) What do you mean by frontogenesis? **[2]**

b) Explain the life cycle of a wave cyclone. **[4]**

c) Explain the significance of synoptic approach in the study of synoptic climatology. **[4]**

Q4) a) Give the types of precipitation. **[2]**

b) Explain the numerical method of weather forecasting. **[4]**

c) Write a short note on cold waves. **[4]**

Q5) a) Explain the medium range forecasting.   **[4]**

 b) Discuss the benefits of weather forecasting in disaster management. **[5]**

Q6) a) Give the benefits of weather forecasting in marine activities.   **[4]**

 b) Explain the importance of satellites in weather forecasting.   **[5]**

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[5128]-204

M.A. / M.Sc.

GEOGRAPHY

Gg - 212 : Agricultural Geography

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1)   Attempt any two questions from question no. 1 to 4.

2)   Question number 5 and 6 are compulsory.

3)   Draw figures / Map wherever necessary.

4)   Use of map stencils is allowed.

5)   Figures to the right indicate full marks.

Q1) a)   Explain the systematic approach to the study of agricultural geography.**[2]**

  b)   Discuss the origin and dispersal of agriculture.   **[4]**

  c)   Explain the influence of irrigation on agriculture.   **[4]**

Q2) a)   What do you mean by dry farming?   **[2]**

  b)   Discuss the impact of relief and soil on agricultural pattern.   **[4]**

  c)   Discuss the influence of market on agricultural pattern.   **[4]**

Q3) a)   What is commercial agriculture?   **[2]**

  b)   Give the characteristics of commercial grain farming.   **[4]**

  c)   Give a brief account of shifting cultivation.   **[4]**

Q4) a)   What do you mean by mixed forming?   **[2]**

  b)   Explain Bhatia's method of calculating agricultural efficiency   **[4]**

  c)   Discuss the agricultural regionalisation.   **[4]**

Q5) a) Discuss the problems of droughts and famines in arid regions.   **[4]**

b) Describe the salient features of dry farming.   **[5]**

Q6) a) Discuss the agricultural landuse.   **[4]**

b) Describe the influence of mechanisation on agricultural patterns.   **[5]**

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[5128]-205

M.A. / M.Sc.

GEOGRAPHY

Gg - 213 : Population Geography

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:
  1) *Attempt any two questions from 1 to 4.*
  2) *Question number 5 and 6 are compulsory.*
  3) *Draw figures / Map wherever necessary.*
  4) *Use of map stencils is allowed.*
  5) *Figures to the right indicate full marks.*

Q1) a) Define population geography.   **[2]**

      b) Explain the nature of population geography.   **[4]**

      c) Discuss the scope of population geography.   **[4]**

Q2) a) What is fertility?   **[2]**

      b) Describe the demographic factors affecting distribution of world
          population.   **[4]**

      c) Discuss the population policies after the World War II.   **[4]**

Q3) a) What do you mean by population projection?   **[2]**

      b) Discuss the levels and trends of mortality in the world.   **[4]**

      c) Critically examine Marx's population theory.   **[4]**

Q4) a) What do you mean by literacy?   **[2]**

      b) Explain literacy and occupation composition.   **[4]**

      c) Discuss urban-rural composition of population.   **[4]**

Q5) a) Describe the causes of migration. **[4]**

b) Explain the causes of high fertility in the world. **[5]**

Q6) a) Describe the use of population projections in education. **[4]**

b) Critically examine the Demographic Transition Theory. **[5]**

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[5128] - 206

M.A./M.Sc.

GEOGRAPHY

Gg-220: Fluvial Geomorphology

(2013 Pattern) (Semester - II)

Time : 3 Hours]

[Max. Marks :38

Instructions to the candidates:

1) *Attempt any two questions from Q.1 to Q.4.*

2) *Question 5 and 6 are compulsory.*

3) *Draw figures / Maps wherever necessary.*

4) *Figures to the right indicate full marks.*

5) *Use of map stencils and calculator is allowed.*

Q1) a) What do you mean by form ratio? **[2]**

   b) Give an account of Glock's model of drainage development. **[4]**

   c) Explain mechanics of fluvial erosion with respect to Horton's overland flow. **[4]**

Q2) a) What is competence of river? **[2]**

   b) Describe the various channel patterns observed in a river meandering channel. **[4]**

   c) Explain the capacity and competence of rivers with reference to sediment entrainment and transport. **[4]**

Q3) a) What do you understand by shear stress in the channel? **[2]**

   b) Give a brief account of bedrock channels. **[4]**

   c) Write a brief account of bed and bank vegetation. **[4]**

Q4) a) What do you mean by long profile? **[2]**

b) Explain the types of fluvial erosion. **[4]**

c) Define river metamorphosis. Explain long term and short term adjustments of river. **[4]**

Q5) a) Distinguish between the types of open channel flows and discuss about uniform and non-uniform flows. **[4]**

b) Explain the relation of discharge with width, depth, velocity and gradient of a channel. **[5]**

Q6) a) Discuss the various erosional features associated with river channel. **[4]**

b) Discuss the mode of sediment transport. **[5]**

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[5128] - 207

M.A/M.Sc.

GEOGRAPHY

Gg-221: Monsoon Climatology

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks :38*

Instructions to the candidates:

1) *Attempt any two questions from Q.1 to Q.4.*
2) *Q. 5 and Q.6 are compulsory.*
3) *Figures to the right side indicate full marks.*
4) *Use of map stencils is allowed.*

Q1) a)   What do you mean by cross-equatorial flow?   **[2]**

   b)   Explain the types of monsoon forecasting based on time scale.   **[4]**

   c)   Explain the connection between Eurasian snow cover and the Monsoons.
                                                                                                                   [4]

Q2) a)   What do you mean by ENSO?   **[2]**

   b)   Explain the 'Walker Circulation'.   **[4]**

   c)   Discuss the decadal and centurial trends in Indian rainfall.   **[4]**

Q3) a)   What do you mean by mid - troposphere cyclones.   **[2]**

   b)   Explain the withdrawl of Monsoons.   **[4]**

   c)   Explain the offshore trough along the west coast of India as rain bearing system.   **[4]**

Q4) a) What is the easterly Jet? **[2]**

b) Discuss the surface and upper winds in the summer Monsoon. **[4]**

c) Explain the role of rotation and moisture in driving the monsoons. **[4]**

Q5) a) Explain the classical theory of monsoon with reference to summer monsoon. **[4]**

b) Discuss the regional aspects of East Asian Monsoon. **[5]**

Q6) a) Explain FÖhn's concept of origin of monsoons. **[4]**

b) Discuss the environmental and economic importance of monsoons. **[5]**

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[5128] - 208

M.A/M.Sc.

GEOGRAPHY

Gg-222: Industrial Geography

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks :38*

Instructions to the candidates:

1)   *Attempt any two questions from Question number 1 to 4.*

2)   *Question 5 and 6 are compulsory.*

3)   *Figures to the right side indicate full marks.*

4)   *Use of map stencils is allowed.*

Q1) a)   Define Industrial Geography.   **[2]**

b)   Write assumptions of Weber's model.   **[4]**

c)   Explain the problems of Anglo-American Industrial regions.   **[4]**

Q2) a)   What do you mean by centralization of Industries?   **[2]**

b)   Critically evaluate Losch's model of Industrial location.   **[4]**

c)   Give an account of 'Chemical Industries in India'.   **[4]**

Q3) a)   State four cotton textile industrial regions in India.   **[2]**

b)   Explain the scope of industrial Geography.   **[4]**

c)   Write a note on regional development of Industries.   **[4]**

Q4) a)   What do you mean by agglomeration?   **[2]**

b)   Describe in brief Western European Industrial regions.   **[4]**

c)   Explain the role of software industries in India.   **[4]**

Q5) a)   Explain the impact of geographical factors on industrial location.   **[4]**

b)   Describe the characteristics of Industrial region.   **[5]**

Q6) a)   Explain the characteristics of decentralisation of Industrial location.   **[4]**

b)   Discuss the salient features of Indian Industrial regions.   **[5]**

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[5128] - 209

M.A/M.Sc.

GEOGRAPHY

Gg-223: Geography of Rural Settlements

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks :38*

Instructions to the candidates:

   1)   *Attempt any two questions from Q.1 to Q.4.*

   2)   *Questions 5 and 6 are compulsory.*

   3)   *Draw figures / map wherever necessary.*

   4)   *Figures to the right indicate full marks.*

   5)   *Use of map stencils is allowed.*

Q1) a)   Give the definition of settlement.   **[2]**

   b)   Discuss the historical aspects of settlements reflected in place names.**[4]**

   c)   Explain the factors affecting nucleation of settlements.   **[4]**

Q2) a)   What is dispersion?   **[2]**

   b)   Discuss the factors affecting growth of settlements.   **[4]**

   c)   Describe Ricardo's theory of land use.   **[4]**

Q3) a)   What is centrality?   **[2]**

   b)   Explain functional growth of rural settlements.   **[4]**

   c)   Discuss the building material used in rural areas.   **[4]**

Q4) a) What do you mean by primitive house type? **[2]**

b) Discuss the rural development planning with reference to land use. **[4]**

c) Explain the factors affecting rural house types. **[4]**

Q5) a) Discuss the demographic characteristics of rural settlements. **[4]**

b) Discuss the causes of migration. **[5]**

Q6) a) Discuss the rural settlement patterns in Maharashtra. **[4]**

b) Explain the economic factors affecting rural hous types. **[5]**

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[5128]-211

M.A. / M.Sc.

GEOGRAPHY

Gg - 205 : Geography of Disaster Management

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) *Attempt any two questions from 1 to 4.*
2) *Question No. 5 and 6 are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Use of map stencils is allowed.*

Q1) a)   What do you mean by disaster?   **[2]**

   b)   Explain the trends in urban disasters.   **[4]**

   c)   Explain the causes of earthquakes.   **[4]**

Q2) a)   Waht is first aid?   **[2]**

   b)   Discuss causes and types of strikes and lockouts.   **[4]**

   c)   Describe the effect of land slide.   **[4]**

Q3) a)   What is disability?   **[2]**

   b)   Describe the economic impacts of floods.   **[4]**

   c)   Discuss the role of police forces in calamities.   **[4]**

Q4) a)   What is resilience?   **[2]**

   b)   Describe the complex emergencies in fire disasters.   **[4]**

   c)   Explain the phases of disaster cycle.   **[4]**

Q5) a) Discuss the various disasters and their management issues in India. **[4]**

b) Discuss the use and application of emerging technologies in disaster management. **[5]**

Q6) a) Explain the role of NGO in disaster management. **[4]**

b) Describe the psychological impact of drought. **[5]**

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[5128] - 212

M.A./M.Sc.

GEOGRAPHY

Gg-206: Geography of Energy Resources

(2013 Pattern) (Semester - II) (Credit System)

Time : 3 Hours]   *[Max. Marks :38*

Instructions to the candidates:

1) *Attempt any two questions from question number 1 to 4.*

2) *Question 5 and 6 are compulsory.*

3) *Figures to the right indicate full marks.*

4) *Use of map stencils is allowed.*

Q1) a)   Define nonrenewable energy resources.   **[2]**

b)   Explain the limitations of natural gas and their utilization problems in India.   **[4]**

c)   Discuss issues related to use of energy and mitigation of energy crisis in India.   **[4]**

Q2) a)   What is the potential zone of energy conservation.   **[2]**

b)   Discuss the issues related to use of energy and environment.   **[4]**

c)   Distinguish between primary and secondary energy resources.   **[4]**

Q3) a)   State four names of coal fields in India.   **[2]**

b)   Explain the forms of energy material based resources.   **[4]**

c)   Explain the spatial patterns of energy consumption in agricultural sector in India.   **[4]**

Q4) a) Define energy conservation. **[2]**

b) Discuss various agreements related with energy crisis. **[4]**

c) Discuss energy management for sustainable development. **[4]**

Q5) a) Give an account of use of energy in developed countries. **[4]**

b) Explain the global scenario of energy requirement. **[5]**

Q6) a) Discuss the traditional and modern methods of energy conservation. **[4]**

b) What are the future prospects of non-conventional energy in India? **[5]**

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[5128]-213

M.A/M.Sc.

GEOGRAPHY

Gg-208 Geoinformatics-I

(2013 Pattern) (Semester-II) (Credit System)

Time : 3 Hours   *Max. Marks : 38*

Instructions to the canddidates:

1) *Attempt any two questions from Q.1 to Q.4*
2) *Question 5and 6 are compulsory*
3) *Figures to the right indicate full marks.*

Q1) a) What are components of GIS?   **[2]**

   b) Discuss the tasks of GIS.   **[4]**

   c) Describe any two applications of GIS.   **[4]**

Q2) a) What is mean by ordinal scale.Give suitable examples.   **[2]**

   b) What are the advantages of DBMS   **[4]**

   c) Discuss the potential of GIS in detail.   **[4]**

Q3) a) Mention the three characterisitics of topology building.   **[2]**

   b) Write a note on manual digitizing.   **[4]**

   c) Explain the errors and correction of errors during digitizing processes.
                                                                                                           [4]

Q4) a) Define spatial query.   **[2]**

   b) Describe the concept of layers and coverages in GIS.   **[4]**

   c) Explain in detail the history of GIS.   **[4]**

Q5) a) Explain the local and focal operations used in map algebra.   **[4]**

   b) Distinguish between the raster and vector data models.   **[5]**

Q6) a) Describe the types of implementation models used in GIS.   **[4]**

   b) Describe the types of query analysis and explain SQL.   **[5]**

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[5128]-301

M.A./M.Sc.

GEOGRAPHY

Gg:301: Geography of India with Special Reference toMaharashtra

(2013 Pattern) (Credit System) (Semester-III)

Time : 2.30 Hour]   *[Max. Marks : 38*

Instructions to the candidates:

1) *Attempt any two questions from questions no.1 to 4.*

2) *Question no.5 and 6 are compulsory.*

3) *Figures to the right indicate full marks.*

4) *Use of map, stencils and calculator is allowed.*

Q1) a) Name the major physiographic divisions of India. **[2]**

b) Explain in short the economic position of India in relation to world. **[4]**

c) Describe the drainage system of the Ganga. **[4]**

Q2) a) What is climate? **[2]**

b) Describe any two soil types of India. **[4]**

c) Discuss the physiography of mountain region. **[4]**

Q3) a) What is soil conservation? **[2]**

b) Describe any two climatic regions of India. **[4]**

c) Describe the monsoon forests in India. **[4]**

Q4) a) What is forest conservation? **[2]**

b) Describe the distribution and production of sugarcane in Maharashtra.**[4]**

c) Give an account of iron ore in India. **[4]**

Q5) a) Give an account of growth and distribution of cotton textile industry in India. **[4]**

b) Describe the growth and distribution of population in Maharashtra. **[5]**

Q6) a) Write a note on underdevelop regions in India. **[4]**

b) Give an acount of problems related to industrial development in Maharashtra. **[5]**

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[5128]-302

M.A./M.Sc.

GEOGRAPHY

Gg - 310: Tropical Geomorphology

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:
1) *Attempt any two questions from question number 1 to 4.*
2) *Question numbers 5 and 6 are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Use of map stencils and calculator is allowed.*

Q1) a) Name any two morphogenetic regions. **[2]**

b) Discuss chemical weathering in the tropics. **[4]**

c) Describe the major secondary minerals found in the tropics. **[4]**

Q2) a) Define tropical weathering. **[2]**

b) Explain the process of slope wash. **[4]**

c) Write a note on distribution of laterites in India. **[4]**

Q3) a) What is chemical denudation? **[2]**

b) Distinguish between domed and boulder inselbergs. **[4]**

c) Explain the morphology of planation surfaces. **[4]**

Q4) a) What is etchplains? **[2]**

b) Discuss the process of erosion and deposition with respect to tropical rivers. **[4]**

c) Discuss the theories of origin of iron in laterites. **[4]**

Q5) a) Explain the changes in vegetation during Quarternary period. **[4]**

b) Explain the nature of tropical terrain. **[5]**

Q6) a) Differentiate between hill slope and pediments in the tropics. **[4]**

b) Explain the various soil formation processes in tropics. **[5]**

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[5128]-303

M.A./M.Sc.
GEOGRAPHY
Gg - 311: Applied Climatology
(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:
1) *Attempt any two questions from question number 1 to 4.*
2) *Question number 5 and 6 are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Use of map stencils is allowed.*
5) *Draw figures/maps wherever necessary.*

Q1) a) What is 'climate impact assessment'? **[2]**

    b) Discuss atmospheric concern and awareness. **[4]**

    c) Describe the instruments to measure air temperature. **[4]**

Q2) a) Define 'Agroclimatology'. **[2]**

    b) Explain the relationship between climate and soil. **[4]**

    c) Discuss 'climate and clothing'. **[4]**

Q3) a) What do you mean by 'global environmental change (GEC)? **[2]**

    b) Discuss the impact of climate on construction operations. **[4]**

    c) Explain 'cooling towers'. **[4]**

Q4) a) Define remote sensing. **[2]**

    b) Discuss the use of remote sensing in detection of plant stress. **[4]**

    c) Explain the techniques of reconstruction of pest climates. **[4]**

Q5) a)   Explain the forms of precipitation.   **[4]**

   b)   Discuss the 'urban heat island'.   **[5]**

Q6) a)   Describe the effects of climate on water transport.   **[4]**

   b)   Describe urban air pollution.   **[5]**

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[5128]-304

M.A./M.Sc.

GEOGRAPHY

Gg - 312: Trade and Transport Geography

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) Attempt any two questions from question number 1 to 4.

2) Question number 5 and 6 are compulsory.

3) Draw figures/map wherever necessary.

4) Figures to the right side indicate full marks.

5) Use of map stencils and calculator is allowed.

Q1) a)   Define trafic flow.   **[2]**

   b)   Explain the commodity approach to the study of trade and transport geography.   **[4]**

   c)   Explain the importance of alternative transport system in urban areas.**[4]**

Q2) a)   What is regional approach?   **[2]**

   b)   Describe the characteristics of ocean waterways in world regional development.   **[4]**

   c)   Explain the prospect of international trade in the era of globalization.**[4]**

Q3) a)   What are the different types of trade?   **[2]**

   b)   Give the significance of transportation in the economy.   **[4]**

   c)   Give an account of gravity models.   **[4]**

Q4) a)   Define hinterlands.   **[2]**

   b)   Describe the impact of road transportation on environment.   **[4]**

   c)   Explain the various treaties of trade at international level.   **[4]**

Q5) a) Explain the role of air transportation in the development. **[4]**

b) Explain the theory of comparative advantage in the world economics.**[5]**

Q6) a) Explain the impact of economic factors on growth of transportation.**[4]**

b) Describe the trade areas and economic blocks. **[5]**

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[5128]-305

M.A./M.Sc.

GEOGRAPHY

Gg - 313: Urban Geography

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:
   1)   Attempt any two questions from question number 1 to 4.
   2)   Question number 5 and 6 are compulsory.
   3)   Figures to the right indicate full marks.
   4)   Use of map stencils is allowed.

Q1) a)   What do you mean by urbanisation?   **[2]**

  b)   Explain the scope of urban geography?   **[4]**

  c)   How is the CBD demarcated?   **[4]**

Q2) a)   What is urban morphology?   **[2]**

  b)   Give a brief history of world urbanisation.   **[4]**

  c)   Explain the concept and process of urbanisation.   **[4]**

Q3) a)   What are the satellite towns?   **[2]**

  b)   Explain the criteria used to demarcate the city region.   **[4]**

  c)   Discuss the age sex-structure of urban population.   **[4]**

Q4) a)   Define urban demography.   **[2]**

  b)   Explain the rank size relationship.   **[4]**

  c)   Discuss the price of land versus vertical growth of cities. **[4]**

Q5) a) Explain the variation in density of population in cities. **[4]**

b) Describe the characteristics of rural-urban fringe. **[5]**

Q6) a) Describe the factors of urban growth. **[4]**

b) Discuss the urban development and urban policy in India. **[5]**

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[5128] - 306

M.A/M.Sc.

GEOGRAPHY

Gg-320: Multivariate Statistics

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks :38*

Instructions to the candidates:

   1)   *Attempt any two questions from Q.1 to Q.4.*

   2)   *Question 5 and 6 are compulsory.*

   3)   *Figures to the right side indicate full marks.*

   4)   *Use of statistical tables and calculator is allowed.*

Q1) a)   Define the terms Order of a Matrix and Identity Matrix.   **[2]**

   b)   Prove the theorem of association for addition.   **[4]**

   c)   Find A * B   **[4]**

$$A = \begin{pmatrix} 58 & 33 & 80 \\ 65 & 48 & 95 \\ 19 & 74 & 52 \end{pmatrix} \quad B = \begin{pmatrix} 128 & 731 & 128 \\ 431 & 481 & 196 \\ 176 & 881 & 235 \end{pmatrix}$$

Q2) a)   What do you understand by non-linear bivariate relationship?   **[2]**

   b)   Using the data given below find the A_0, A_1 and A_2 determinants.   **[4]**

X	28	11	20	3	7	16	25	13	37	31	35
Y	6	5	9	2	3	7	8	6	1	5	3

   c)   From the Determinants found in above Q2b obtain the second degree bivariate regression equation. and interpret the results.   **[4]**

Q3) a) Write the given data in a proper variance covariance matrix format. **[2]**

Means: $\bar{Y} = 7.2$; $\bar{X}_1 = 7.36$; $\bar{X}_2 = 6.4$; $n = 5$

Variances: $\sigma^2 Y = 7.54$; $\sigma^2 X_1 = 4.75$; $\sigma^2 X_2 = 3.44$

Covariances: $CovYX_1 = -2.35$; $CovYX_2 = 0.3$; $CovX_1X_2 = -2.14$

b) Using the data given in Q3 a find the A_0, A_1 and A_2 determinants. **[4]**

c) Using the determinants obtained above compute a multiple regression equation, explained variance and interpret the results. **[4]**

Q4) a) Define the term varimax rotation. **[2]**

b) Using the following matrix obtain the first factor loadings matrix. **[4]**

	X_1	X_2	X_3	X_4	X_5
X_1	1	0.55	0.34	0.45	0.4725
X_2		1	0.43	0.58	0.35
X_3			1	0.94	0.92
X_4				1	0.84
X_5					1

c) Compute Eigen vector and the variance explained by the factor loadings from the above given data and interpret the results. **[4]**

Q5) a)   Following data records the depth of water in wells in meters at different locations in a region. Fit a situable trend surface equation.   **[5]**

X	10	20	21	30	32	40	50	50	60	75
Y	10	22	40	20	50	43	30	52	62	66
Z	20	32	35	34	41	40	38	45	50	52

b)   Obtain the explained variance, level of significance at 0.05 level for the result obtained from Q5 a) and interpret the results.   **[4]**

Q6) a)   Using the correlation matrix given Q.4 b Compute the first Principal component loadings.   **[5]**

b)   From the Principal loadings obtained in the Q.6 a find Eigen value, explained variance and interpret the result.   **[4]**

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[5128]-307

M.A./M.Sc.

GEOGRAPHY

Gg- 321: Political Geography

(2013 Pattern) (Credit System) (Semester - III)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:
1) *Attempt any two questions from Q.1 to Q.4.*
2) *Question number 5 and 6 are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Use of map stencils is allowed.*

Q1) a) What is nation state? **[2]**

    b) Explain what is territoriality with reference to land, water and air. **[4]**

    c) Explain nation building. **[4]**

Q2) a) Define frontiers. **[2]**

    b) Explain the functional classification of boundaries. **[4]**

    c) Explain the global geostrategic views of cohen. **[4]**

Q3) a) What do you mean by centrifugal forces? **[2]**

    b) Discuss the relevance of England in geo-politics of border states of the Indian ocean. **[4]**

    c) Discuss political geography of SAARC region. **[4]**

Q4) a) What do you mean by unity in diversity? **[2]**

    b) Describe the various interstate water disputes in India. **[4]**

    c) Discuss the emergence of new states in India. **[4]**

Q5) a) Discuss the field and scope of Political Geography. **[4]**

b) Explain the various centripetal forces. **[5]**

Q6) a) Write in brief the history and development of political Geography. **[4]**

b) Explain the Functional approach to the study of political Geography. **[5]**

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[5128]-308

M.A./M.Sc.

GEOGRAPHY

Gg- 322: Geography Of Soils

(2013 Pattern) (Credit System) (Semester - III)

Time : 3 Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) *Attempt any two questions from Q.1 to Q.4.*
2) *Question 5 and 6 are compulsory.*
3) *Draw figures/maps wherever necessary.*
4) *Figures to the right side indicate full marks.*
5) *Use of map stencils is allowed.*

Q1) a) Define the term Hydrology. **[2]**

    b) Establish relation between soils and forest. **[4]**

    c) Explain the role of parent material in soil formation. **[4]**

Q2) a) What is meant by soil porosity? **[2]**

    b) Explain the processes of humus formation. **[4]**

    c) Explain different processes of physical weathering. **[4]**

Q3) a) What is land capability? **[2]**

    b) Explain how incorrect methods of farming affect quality. **[4]**

    c) What do you mean by soil acidity? **[4]**

Q4) a) What is soil texture? **[2]**

    b) Explain soil horizon. **[4]**

    c) Explain role of bio chemical properties in soil. **[4]**

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Q5) a) Explain in detail soil color and soil temperature. **[4]**

b) Explain the process of soil formation. **[5]**

Q6) a) Discuss the problems of soil contamination. **[4]**

b) Explain the problems of overgrazing. **[5]**

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[5128]-309

M.A/M.Sc.

GEOGRAPHY

Gg - 303 : Research Method in Geography

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]

[Max. Marks : 38]

Instructions to the candidates:

1) Attempt any two questions from question no.1 to 4.

2) Question No.5 and 6 are compulsory.

3) Figures to the right indicate marks.

4) Use of map stencils is allowed.

Q1) a) Define plane survey. **[2]**

b) Explain the principles of dumpy level survey **[4]**

c) Describe the various methods of survey. **[4]**

Q2) a) What is drainage basin. **[2]**

b) Explain terrain cross profiles. **[4]**

c) Explain significance and use of SOI toposheet. **[4]**

Q3) a) What is flight line? **[2]**

b) Explain data base creation from satellite imageries. **[4]**

c) Explain measurements of relative heights. **[4]**

.**Q4)** a) What is parametric test. **[2]**

b) Explain multivariate correlation analysis. **[4]**

c) Explain the nature of Geographical data. **[4]**

Q5) a) Explain the use of GIS in spatial data modelling. **[4]**

b) Give the importance of questionnaire in field work. **[5]**

Q6) a) " Research problem is the base of report writting" Discuss. **[4]**

b) Conclusions of any research is the gist. "Discuss". **[5]**

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[5128]-310

M.A./M.Sc.

GEOGRAPHY

Gg - 304 : Social & Cultural Geography

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks : 38]*

Instructions to the candidates:

   1)   *Attempt any two questions from question no.1 to 4.*

   2)   *Question No.5 and 6 are compulsory.*

   3)   *Figures to the right indicate marks.*

   4)   *Use of map stencils and calculators is allowed.*

Q1) a)   Define social geography.   **[2]**

      b)   Discuss the nature of social geography.   **[4]**

      c)   Describe the development of social geography.   **[4]**

Q2) a)   Explain the concept of idealism.   **[2]**

      b)   Explain the base and concept of existentialism   **[4]**

      c)   Discuss the base and concept of humanism.   **[4]**

Q3) a)   What is individual space?   **[2]**

      b)   Discuss interaction and social relations in society.   **[4]**

      c)   Describe the types and structure of social groups.   **[4]**

.Q4) a)   Define urbanisation.   **[2]**

      b)   Explain the types of migration.   **[4]**

      c)   Explain the cultural diversities.   **[4]**

Q5) a)   Describe the components and indicators of social well being.   **[4]**

b)   Describe the patterns of social well being in India.   **[5]**

Q6) a)   Explain the impact of technology on human settlements.   **[4]**

b)   Describe the rural-urban contrasts in housing health and education.   **[5]**

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[5128] - 311

M.A/M.Sc.

GEOGRAPHY

Gg-306: Geoinformatics - III

(2013 Pattern) (Semester - III) (Credit System)

Time : 3 Hours]   *[Max. Marks :38*

Instructions to the candidates:

1)   *Attempt any two questions from Q.1 to Q.4.*

2)   *Question 5 and 6 are compulsory.*

3)   *Figures to the right side indicate full marks.*

Q1) a)   Mention any two analytical tasks of spatial analysis.   **[2]**

b)   Explain multiple layer operations in GIS.   **[4]**

c)   Discuss the applications of Digital Elevation Model (DEM).   **[4]**

Q2) a)   What are systematic errors in digitization?   **[2]**

b)   Explain in brief topological overlays in GIS.   **[4]**

c)   Write a note on network analysis.   **[4]**

Q3) a)   Mention any two classifiers of Digital Image Processing (DIP).   **[2]**

b)   Explain atmospheric and radiometric distortions.   **[4]**

c)   Write a note on GCP tools.   **[4]**

Q4) a)   What is density slicing?   **[2]**

b)   What is ISODATA approach in image classification?   **[4]**

c)   Explain the significance of ISODATA approach in unsupervised classification.   **[4]**

Q5) a) Give an account of classification accuracy in digital image processing.**[4]**

b) Explain spatial modeling as an analytical task in spatial analysis. **[5]**

Q6) a) What is a confusion matrix? Give its significance in DIP. **[4]**

b) Explain in breif significance and applications of DTM. **[5]**

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[5128]-401

M.A./M.Sc.

GEOGRAPHY

Gg - 401 : Theoretical and Applied Geography
(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:
  1) *Attempt any two questions from question No. 1 to 4.*
  2) *Question number 5 and 6 are compulsory.*
  3) *Draw figures/maps when ever necessary.*
  4) *Use of map stencils and calculator is allowed.*
  5) *Figures to the right side indicate full marks.*

Q1) a)   Explain geography as chorology.   **[2]**

  b)   Discuss the contribution of Greeks to mathematical geography.   **[4]**

  c)   Give a brief account of work of vidal de Lablache.   **[4]**

Q2) a)   What do you mean by dichotomies in geography?   **[2]**

  b)   "There is need to revisit determinism in the context of contemporary
       global environmental problems". Discuss.   **[4]**

  c)   Explain the nature of systematic geography.   **[4]**

Q3) a)   Define paradigms.   **[2]**

  b)   Explain the structure and relationship in system approach.   **[4]**

  c)   Elucidate the significance of hypothesis in geography.   **[4]**

Q4) a) Define geoinformatics. **[2]**

    b) Give a brief account of quantitative revolution. **[4]**

    c) Describe the field survey process in geography. **[4]**

Q5) a) Discuss the scope and relevance of applied geography. **[4]**

    b) Explain the remote sensing based assessment technique of land use planning. **[5]**

Q6) a) Explain the approaches to the natural resource management? **[4]**

    b) Describe the stages of regional planning? **[5]**

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[5128]-402

M.A. / M.Sc.

GEOGRAPHY

Gg - 402 : Principles of Remote Sensing and GIS

(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) Attempt any two questions from Q1 to Q4.

2) Question 5 and 6 are compulsory.

3) Draw figures / Map wherever necessary.

4) Figures to the right indicate full marks.

Q1) a)   What do you mean by electromagnetic spectrum?   **[2]**

b)   Explain the concept of remote sensing.   **[4]**

c)   Discuss the various types of sensing platform.   **[4]**

Q2) a)   What are the passive sensors?   **[2]**

b)   Discuss the geostationary satellites.   **[4]**

c)   Describe the characteristics of optical mechanical scanners.   **[4]**

Q3) a)   Enlist the elements of image interpretation.   **[2]**

b)   Explain the concept of GIS.   **[4]**

c)   Discuss the data structure and formats in GIS.   **[4]**

Q4) a)   What do you mean by vector data model?   **[2]**

b)   Discuss the data base design.   **[4]**

c)   Explain the raster based spatial data analysis.   **[4]**

Q5) a) Explain the black body radiation. **[4]**

b) Explain the basic concept and principles of thermal sensing. **[5]**

Q6) a) Explain the temporal and radiometric resolution. **[4]**

b) Explain the linkage between spatial and nonspatial data. **[5]**

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[5128] - 403

M.A/M.Sc.

GEOGRAPHY

Gg-411: Geostatistics

(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks :38*

Instructions to the candidates:

   1)   *Attempt any two questions from Q.1 to Q.4.*

   2)   *Question 5 and 6 are compulsory.*

   3)   *Draw figures wherever necessary.*

   4)   *Figures to the right indicate full marks.*

Q1) a)   Define isotropy and anisotropy.   **[2]**

     b)   Give the definition and meaning of geostatistics.   **[4]**

     c)   Explain the point patterns and area with counts as spatial data sets of geostatistics.   **[4]**

Q2) a)   Define the term Exploratory Data Analysis (EDA).   **[2]**

     b)   Explain with proper examples the terms heterogeneity and dependency in geostatisstics   **[4]**

     c)   Enlist the bivariate descriptors used in geostatistics and explain any two of them with suitable examples.   **[4]**

Q3) a)   Define the term autocorrelation.   **[2]**

     b)   Explain in brief the concept of correlogram.   **[4]**

     c)   Elaborate the concept of semivariogram.   **[4]**

Q4) a) Define correlogram. **[2]**

b) Describe the components of variogram. **[4]**

c) Explain the characteristics of Markov chain analysis. **[4]**

Q5) a) Give the characteristics of global versus local and abrupt versus smooth techniques of spatial interpolation techniques. **[4]**

b) Describe the spatial interpolation technique - Inverse Distance Weighted (IDW). **[5]**

Q6) a) Give the merits and demerits of cluster analysis. **[4]**

b) Write a note on applications of cluster analysis in the studies of Earth sciences. **[5]**

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[5128]-404

M.A./M.Sc.
GEOGRAPHY

Gg - 420 : Regional Planning and Development
(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:

    1)   *Attempt any two questions from question No. 1 to 4.*

    2)   *Question 5 and 6 are compulsory.*

    3)   *Figures to the right indicate full marks.*

    4)   *Use of map stencils is allowed.*

Q1) a)   Name the various approaches to regional planning.   **[2]**

     b)   Write a note on levels of planning.   **[4]**

     c)   Explain the proper hierarchy of planning.   **[4]**

Q2) a)   What is a planning region?   **[2]**

     b)   Explain the concept of a region.   **[4]**

     c)   Write a note on regional survey in regional planning.   **[4]**

Q3) a)   What do you mean by dispersal?   **[2]**

     b)   Explain the techniques of regional planning.   **[4]**

     c)   Explain the planning strategies for developed countries.   **[4]**

Q4) a)   What is meant by block level planning?   **[2]**

     b)   How to measure the regional development?   **[4]**

     c)   Give in detail new trends in regional planning.   **[4]**

Q5) a)   Write a note on multilevel planning.   **[4]**

     b)   Give the planning for river basins.   **[5]**

Q6) a)   Discuss in detail the concept of regionalisation.   **[4]**

     b)   Explain the relationship between regional policies and Five Year plans in India.   **[5]**

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[5128]-405

M.A./M.Sc.

GEOGRAPHY

Gg - 421 : Geography of Water Resources

(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) *Attempt any two questions from question Q.1 to Q. 4.*
2) *Questions 5 and 6 are compulsory.*
3) *Draw figures/maps wherever necessary.*
4) *Figures to the right indicate full marks.*
5) *Use of map stencils is allowed.*

Q1) a) What do you mean by evapotranspiration? **[2]**

   b) Give the distribution of world's water resources. **[4]**

   c) Explain how the water resources get renewed through hydrologic cycle?**[4]**

Q2) a) What do you mean by cropping pattern? **[2]**

   b) Discuss the methods of estimation of municipal uses of water. **[4]**

   c) Describe the need of soil water conservation. **[4]**

Q3) a) What are industrial effluents? **[2]**

   b) Explain utilization of water by different types of industries. **[4]**

   c) Describe water pollution and treatment. **[4]**

Q4) a) What do you mean by conservation of water? **[2]**

   b) Discuss the integrated watershed management. **[4]**

   c) Discuss the proposed Ganga-Caveri Garland Project. **[4]**

Q5) a) Explain afforestation and land use regulation as measures of water management. **[4]**

   b) Discuss the Krishna water dispute. **[5]**

Q6) a) Explain the process of percolation and runoff. **[4]**

   b) Discuss 'water balance and drought'. **[5]**

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M.A./M.Sc.

GEOGRAPHY

Gg - 422 : Biogeography

(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) *Attempt any two questions from question Q.1 to Q. 4.*
2) *Questions No.5 and No.6 are compulsory.*
3) *Draw figures / maps wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Use of map stencils and calculators is allowed.*

Q1) a) What is extinction process?   **[2]**

  b) Define biogeography and describe its histroy in detail.   **[4]**

  c) Explain the ancient patterns in distribution of plants and animals.   **[4]**

Q2) a) Write the hazards of island life.   **[2]**

  b) Discuss the variety of island habitats.   **[4]**

  c) Describe the factors of physical limitation of life.   **[4]**

Q3) a) What is ecosystem?   **[2]**

  b) Explain concept of evolution and adaptation as basic process in biogeography. **[4]**

  c) Describe biomass of deserts.   **[4]**

Q4) a) What is biome?   **[2]**

  b) Explain the evidences of paleomagnetism   **[4]**

  c) Describe major zoogeographical provinces in the world.   **[4]**

Q5) a) Discuss the biodiversity pattern.   **[4]**

  b) Describe the nature and scope of biogeography.   **[5]**

Q6) a) Explain the distribution pattern of habitats and microhabitats. **[4]**

  b) Describe temperate broad leaf forest biomes with respect to regional climate and species richness. **[5]**

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M.A./M.Sc.

GEOGRAPHY

Gg - 423 : Oceanography

(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:

   1)   *Attempt any two questions from question Q.1 to Q. 4.*

   2)   *Questions 5 and 6 are compulsory.*

   3)   *Draw figures / maps wherever necessary.*

   4)   *Figures to the right indicate full marks.*

   5)   *Use of map stencils is allowed.*

Q1) a)   Define Oceanography.   **[2]**

     b)   Give evidences of continental drift theory.   **[4]**

     c)   Explain the features of abyssal Plains.   **[4]**

Q2) a)   Name the major plates of the world.   **[2]**

     b)   Give an account of contribution of oceanographers to oceanography.**[4]**

     c)   Explain neap tides.   **[4]**

Q3) a)   What are oceanic oozes?   **[2]**

     b)   Explain tidal bores.   **[4]**

     c)   Explain factors affecting temperature of sea water.   **[4]**

Q4) a)   Define viscosity.   **[2]**

     b)   Discuss the various oceanic ridges and rises.   **[4]**

     c)   Explain the effects of Tsunami.   **[4]**

Q5) a)   Explain breaking of waves.   **[4]**

     b)   Describe the ocean currents of the Atlantic ocean.   **[5]**

Q6) a)   Explain the nature and distribution of biogenous sediments.   **[4]**

     b)   Give an account of Thermohaline circulation.   **[5]**

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M.A./ M.Sc.
GEOGRAPHY
Gg-424: Natural and Manmade Hazards
(2013 Pattern) (Credit System) (Semester - IV)

Time : 2½ Hours]   *[Max. Marks : 38*

Instructions to the candidates:

1) *Attempt any two questions from question number 1 to 4.*

2) *Question number 5 and 6 are compulsory.*

3) *Figures to the right indicate full marks.*

4) *Use of map stencils is allowed.*

Q1) a)   Define natural hazards.   **[2]**

   b)   Explain the causes and consequences of cyclonic storms.   **[4]**

   c)   Describe the effects of dust storms.   **[4]**

Q2) a)   What do you mean by disaster prevention?   **[2]**

   b)   Explain the causes of landslides.   **[4]**

   c)   Describe the causes and effects of subsidence.   **[4]**

Q3) a)   What do you mean by disaster preparedness?   **[2]**

   b)   Discuss the causes and effects of deposition.   **[4]**

   c)   Explain the effects of release of toxic elements in water.   **[4]**

Q4) a)   What do you mean by geological hazards?   **[2]**

   b)   Explain the causes of Tsunami.   **[4]**

   c)   Describe the factors contributing to manmade hazards.   **[4]**

Q5) a) Discuss the causes and effects of desertification. **[4]**

b) Explain the causes and effects of forest fires. **[5]**

Q6) a) Discuss the effects of flood at Kedarnath in 2013. **[4]**

b) Explain the causes of earthquakes. **[5]**

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M.A. / M.Sc.

GEOGRAPHY

Gg - 441 : Principles of Regional Geography & Project Work

(2013 Pattern) (Semester - IV)

Time : 2½ Hours]   *[Max. Marks : 25*

Instructions to the candidates:
1) *Attempt any two questions from Q.1 to Q.3.*
2) *Attempt any one question from question 4 to 5.*
3) *Draw Figures / Map wherever necessary.*
4) *Figures to the right indicate full marks.*
5) *Use of map stencils & calculator is allowed.*

Q1) a) What is Regional Geography? **[2]**

    b) Explain the cumulative causation. **[4]**

    c) Describe the causes of regional disparities. **[4]**

Q2) a) Define the term 'Hierarchy'. **[2]**

    b) Explain the regional approach. **[4]**

    c) Discuss the application of Growth Pole Theory in India. **[4]**

Q3) a) Explain the concept of reginalization. **[2]**

    b) Describe the K4 and K7 principles. **[4]**

    c) Explain the remedies for regional disparities. **[4]**

Q4) a) Describe the importance of 'Regional Geography'. **[2]**

    b) Discuss the application of Myrdal's theory in regional planning. **[3]**

Q5) a) What is the idea of 'Growth Pole Theory'? **[2]**

    b) Discuss the application of the transportation principle by Christaller. **[3]**

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M.A./M.Sc.

GEOGRAPHY

Gg-404: Geography of Food Security of India

(2013 Pattern) (Semester - IV) (Credit System)

Time : 2½ Hours]   *[Max. Marks :38*

Instructions to the candidates:

   1)   *Attempt any two questions from Q.1 to Q.4.*

   2)   *Question 5 and 6 are compulsory.*

   3)   *Draw figures/Maps wherever necessary.*

   4)   *Figures to the right indicate full marks.*

   5)   *Use of map stencils and calculator is allowed.*

Q1) a)   What is food sovereignty?   **[2]**

     b)   Explain land rights and land holdings.   **[4]**

     c)   Explain hunger, malnutrition and food availability.   **[4]**

Q2) a)   Explain the concept of food justice.   **[2]**

     b)   Explain how the interdisciplinary approach in understanding food security.   **[4]**

     c)   Discuss India's Food Security Bill, 2013.   **[4]**

Q3) a)   What is agricultural productivity?   **[2]**

     b)   Explain the food security conditions at National level.   **[4]**

     c)   What are the social factors affecting food security?   **[4]**

Q4) a)   What is gender inequality?   **[2]**

b)   Explain the role of media in food security.   **[4]**

c)   Explain the physical factors affecting food security.   **[4]**

Q5) a)   Explain the importance and availability of food security.   **[4]**

b)   Examine the distribution of major food crops in India.   **[5]**

Q6) a)   Examine the distribution of cash crops in India.   **[4]**

b)   Explain the food security conditions in India at the state level.   **[5]**

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M.A./M.Sc.
GEOGRAPHY
Gg- 405 :Geography of Health
(2013 Pattern) (Credit System) (Semester-IV)

Time : 2:½ Hours]   *[Max.Marks:38*

Instructions to the candidates:
1) *Attempt any two questions from Q. No. 1 to Q. No. 4.*
2) *Q.No. 5 and 6 are compulsory.*
3) *Draw figures/maps wherever necessary.*
4) *Figures to the right indicate full makrs.*

Q1) a)   Mention various approaches in Geography of Health.   **[2]**
b)   Explain the effect of global warming on human health.   **[4]**
c)   Discuss various challenges in Geography of health.   **[4]**

Q2) a)   What do you mean by genetic disease?   **[2]**
b)   Explain various types of communicable disease.   **[4]**
c)   Discuss WHO's classification of diseases.   **[4]**

Q3) a)   Define malnutrition.   **[2]**
b)   Explain diffusion of diseases.   **[4]**
c)   Describe various political aspects of health care in India. **[4]**

Q4) a)   List any two customs in India that affect human health.   **[2]**
b)   Explain the relation between environment and human health.   **[4]**
c)   Discuss various health problems of tribal communities in India. **[4]**

Q5) a)   Explain the effect of urbanization on human health.   **[4]**
b)   Describe the effect of pollution on human health.   **[5]**

Q6) a)   Explain the impact of environmental pollution on health in peri-urban areas.
[4]
b)   Write the significance of primary health care centers in India. **[5]**

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M.A./M.Sc.

GEOGRAPHY

Gg-407 Regional Geography of SAARC Countries

(2013 Pattern) (Credit system) (Semester-IV)

Time : 2½Hours]   *[Max. Marks : 38*

Instructions to the canditates:

   1)   *Attempt any two questions from Q.1 to Q.4.*

   2)   *Question 5and 6 are compulsory.*

   3)   *Draw figures /map wherever necessary.*

   4)   *Figures to the right side indicate full marks.*

   5)   *Use of map stencils is allowed.*

Q1)   a)   Give the latitudinal and longitudinal extent of Afghanistan.   **[2]**

       b)   Describe the drainage aspects of sri Lanka.   **[4]**

       c)   Give history of SAARC organization.   **[4]**

Q2)   a)   Enlist the Island's of Maldives.   **[2]**

       b)   Explain physiography of Sri Lanka.   **[4]**

       c)   Describe the cultural aspect of Afghanistan.   **[4]**

Q3)   a)   Give the types of vegetation in Bhutan.   **[2]**

       b)   Explain the economic aspects of Maldives.   **[4]**

       c)   Describe the demography of Nepal.   **[4]**

Q4)   a)   Enlist the main mountain ranges of Nepal.   **[2]**

       b)   Explain the demographic aspects of Bhutan.   **[4]**

       c)   Explain drainage system of Pakistan.   **[4]**

Q5)   a)   Describe the climate of India.   **[4]**

       b)   Explain the cultural aspects of Bangladesh.   **[5]**

Q6)   a)   Write a note on vegetation of India.   **[4]**

       b)   Describe the climate of Bangladesh.   **[5]**

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