

Total No. of Questions : 7]

SEAT No. :

[Total No. of Pages : 1

P917

[5435]-11

M.A./M.Sc. (Semester - I)

GEOGRAPHY

(Gg - 101) : Principles of Geomorphology

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures/maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) Explain the term Isostasy and write in detail the concept of isostatic equilibrium.

Q2) Discuss the process of Folding and Faulting and explain its effects on landform development.

Q3) Give an account of different depositional landforms formed by the work of sea waves.

Q4) Differentiate between erosion and weathering and discuss the various processes involved in chemical weathering.

Q5) Define drainage basin and describe various types of drainage patterns.

Q6) What is slope morphology? Explain the theory of parallel retreat of slope.

Q7) Write notes on any two.

- a) Process geomorphology
- b) Evidences and criticism on Wegener's continental drift theory.
- c) Fluvial landforms.



Total No. of Questions : 7]

SEAT No. :

P918

[Total No. of Pages : 1

[5435]-12

M.A./M.Sc. (Semester - I)

GEOGRAPHY

Gg - 102 : Principles of Climatology

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

- Q1)* What is Climatology? Explain the nature and scope of Climatology.
- Q2)* Describe the structure of the earth's atmosphere with diagram.
- Q3)* Give an account of latitudinal and seasonal variation of insolation.
- Q4)* Explain the basic concept of inversion of temperature and give its effects.
- Q5)* Explain in detail the eddy theory of atmospheric circulation.
- Q6)* What is condensation? Describe various factors affecting condensation.
- Q7)* Write notes on any two.
- a) Gradient wind.
 - b) Source regions of airmasses
 - c) Methods of weather forecasting



Total No. of Questions : 7]

SEAT No. :

P919

[Total No. of Pages : 1

[5435]-13

M.A./M.Sc. (Semester - I)

GEOGRAPHY

Gg - 103 : Principles of Economic Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures/maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) What is Economic Geography? Explain its nature and scope.

Q2) Critically examine the Weber's model.

Q3) Explain the importance of human resources, in economic development of a nation.

Q4) Describe variations in cost of transportation and demand.

Q5) Describe the various factors influencing the international trade.

Q6) Explain the various factors of regional disparity with respect to economic development in India.

Q7) Write notes (any two) :

- a) Testing of hypothesis.
- b) Myrdal's model.
- c) Impact of Green Revolution in India.



Total No. of Questions : 7]

SEAT No. :

P920

[Total No. of Pages : 1

[5435]-14

M.A./M.Sc. (Semester - I)

GEOGRAPHY

Gg - 104 : Principles of Settlement and Population Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Describe the evolution of settlement and population geography in detail.

Q2) Write an essay on patterns of settlement.

Q3) Give an account of methods to measure degree of dispersion.

Q4) Explain the levels of urbanization in the world.

Q5) How social and physical factors influence distribution of population?

Q6) Explain the demographic transition model.

Q7) Write notes on any two :

- a) Various aspects of population resources.
- b) Man and environment relationship.
- c) Rank - size distribution.



Total No. of Questions : 7]

SEAT No. :

P921

[Total No. of Pages : 3

[5435]-21

M.A/M.Sc. (Semester - II)

GEOGRAPHY

Gg - 201 : Quantitative Techniques in Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.
- 2) Use of calculator and statistical table is allowed.
- 3) Figures to the right hand side bracket indicate full marks..

- Q1) a) Explain the difference between inferential and descriptive statistics. [6]
- b) Calculate median and standard deviation for the given data and comment on the result. [14]

Class	15-25	25-35	35-45	45-55	55-65	65-75	75-85
Frequency	05	22	67	34	12	06	02

- Q2) a) Define the term probability and give the properties of Poisson distribution. [6]
- b) The 'A' horizon of a podzolic soil in a locality of generally uniform terrain has a mean depth of 10cm, with a standard deviation of 2cm. Assuming the depth of 'A' horizon to be normally distributed, what is the probability that a randomly selected soil profile will have an 'A' horizon of the following depths : [14]
- i) Less than 8cm,
 - ii) More than 14cm,
 - iii) Between 10 to 12cm,
 - iv) Exactly 10cm.

P.T.O

- Q3) a)** Explain the concept of confidence interval for mean. [6]
- b)** The following table records the production of wheat of a region. Calculate seven years moving average and plot the same. [14]

Year	1980	1981	1982	1983	1984	1985	1986	1987
Production (in '000 tons)	20	36	34	54	45	46	54	59

Year	1988	1989	1990	1991	1992	1993	1994	1995
Production (in '000 tons)	76	85	92	91	50	65	89	99

- Q4) a)** Explain the terms 'Skewness' and 'Kurtosis'. [6]
- b)** The following table records number of sandbars with respect to their occurrence from the source of a river. Compute the correlation coefficient 'r' using Pearson's product moment method. [14]

Distance from source (km)	25	10	16	20	11	09	10	17	25
No.of Sandbars	08	08	07	12	07	06	06	09	10

- Q5) a)** Discuss the concept of bivariate regression. [6]
- b)** Obtain a simple linear regression equation for the following data and estimate the value of 'y' for 'x'=21 and 'x'=2. [14]

X Distance from left bank of river (in m)	03	06	08	10	12	14	16	19
Y Velocity (m/s)	0.2	1.2	1.41	1.62	1.71	1.92	1.94	2.2

Q6) Four samples were analysed for determining their sediment texture. The amount of silt-clay component obtained are represented in the following table, using F-test, test the hypothesis that the samples are representative of the population. (significance level-0.05) **[20]**

Sample 1	Sample 2	Sample 3	Sample 4
0.2	4.8	12.3	16.8
1.2	5.6	13.3	17.2
1.8	5.8	13.8	17.6
2.4	7.2	15.6	18.3
3.9	8.3	16.1	18.5

Q7) Write notes (any two) :

[20]

- a) Types of geographical data.
- b) Properties of time series data.
- c) Binomial distribution.



Total No. of Questions : 7]

SEAT No. :

P922

[Total No. of Pages : 1

[5435]-22

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 210 : Tropical Geomorphology

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Discuss the climatic factors governing the tropical environment.

Q2) Give an account of nature of deep weathering profile in the tropics.

Q3) Give an account of 'Tropical soils'.

Q4) Discuss various theories of origin of iron in laterites.

Q5) Distinguish between mechanical and chemical denudation and discuss various processes involved in chemical denudation.

Q6) Describe the process of formation and various types of planation surfaces.

Q7) Write notes (any two) :

- a) Mass movement.
- b) Quaternary changes in climate.
- c) Tropical Coasts.



Total No. of Questions : 7]

SEAT No. :

P923

[Total No. of Pages : 1

[5435]-23

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 211 : Synoptic Climatology

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Explain in details the formation of easterly waves and give their characteristics.

Q2) Explain the origin and structure of thunder storms and give their environmental impact.

Q3) Explain airmasses of North America and describe principal zones of frontogenesis.

Q4) Explain in details any two theories of rain formation.

Q5) Explain numerical method of weather forecasting and give importance of satellites in weather forecasting.

Q6) Give an account of benefits of weather forecasting in disaster prevention and preparedness.

Q7) Write notes on any two :

- a) Nature of Synoptic Climatology
- b) Rossby waves.
- c) Heat waves.



Total No. of Questions : 7]

SEAT No. :

P924

[Total No. of Pages : 1

[5435]-24

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 212 Agricultural Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Define agricultural geography. Explain its nature and scope.

Q2) Explain the significance of agriculture in world regions.

Q3) Describe the economic factors affecting agriculture.

Q4) Bring out the characteristics and practices of commercial grain farming.

Q5) Explain the characteristics of agriculture in arid - regions.

Q6) Critically evaluate the crop combination method of weaver in agricultural regionalization.

Q7) Write notes (any two) :

- a) Systematic approach to the study of agricultural geography.
- b) Importance of landuse surveys.
- c) Shifting cultivation.



Total No. of Questions : 7]

SEAT No. :

P925

[Total No. of Pages : 1

[5435]-25

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 213 Population Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencil is allowed.*

Q1) "Population geography is an inter-disciplinary subject". Explain.

Q2) Explain in brief factors affecting growth of population.

Q3) Describe the Demographic Transition Model.

Q4) Explain the physical factors affecting density of population.

Q5) What do you mean by mortality? Explain the trends of mortality in developed countries.

Q6) Discuss the types of migration in detail.

Q7) Write notes (any two) :

- a) Literacy and resource management.
- b) Population projection.
- c) Occupational composition of population.



Total No. of Questions : 7]

SEAT No. :

P926

[Total No. of Pages : 1

[5435]-26

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 214 : Geoinformatics - I (Paper - I)

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Define GIS and describe the tasks of GIS.

Q2) Examine the non-spatial Database.

Q3) Compare the raster and vector data models used in GIS.

Q4) Give an account of the errors in the digitizing process and explain the correction with suitable examples.

Q5) Describe the various applications of GIS.

Q6) Give an account of local and focal grid operations.

Q7) Write notes (any two) :

- a) SQL.
- b) Layers and Coverages.
- c) Operations from set Theory.



Total No. of Questions : 7]

SEAT No. :

P927

[Total No. of Pages : 1

[5435]-27

M.A./M.Sc (Semester - II)

GEOGRAPHY

Gg - 220 : Fluvial Geomorphology

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencil is allowed.*

Q1) "The Drainage basin can be thought as a geomorphic unit". Examine the statement.

Q2) Discuss the mechanics of fluvial erosion with reference to overland flow.

Q3) 'Width, Depth, Velocity of a channel are the resultant factors of discharge' Elaborate.

Q4) Describe various channel patterns.

Q5) What is concept of grade? Explain near grade and above grade conditions.

Q6) Explain various fluvial depositional landforms and associated features created by a river with suitable diagrams.

Q7) Write notes (Any two) :

- a) Glock's Model of drainage development.
- b) Stream energy.
- c) River terraces.



Total No. of Questions : 7]

SEAT No. :

P928

[Total No. of Pages : 1

[5435]-28

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 221 : Monsoon Climatology

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Mention various concepts of origin of monsoon and elaborate any one of them.

Q2) Give an account of regional aspects of South Asian monsoon.

Q3) Describe briefly the classical theory of Indian monsoon and compare summer and winter monsoons.

Q4) Explain the effect of rotation of the earth and moisture on mechanism of monsoon.

Q5) Bring out the importance of parametric and multiple power regression model in monsoon forecasting.

Q6) Write an account of main rain bearing systems of South Asian monsoons.

Q7) Write notes (any two) :

- a) Economic importance of monsoon climatology.
- b) Tibetan anticyclone.
- c) Walker circulation.



Total No. of Questions : 7]

SEAT No. :

P929

[Total No. of Pages : 1

[5435]-29

M.A./M.Sc. (Semester - II)

GEOGRAPHY

Gg - 222 : Industrial Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencil is allowed.*

Q1) Define Industrial Geography and Explain its nature and scope.

Q2) Critically examine Weber's model of industrial location.

Q3) Give an account of changing pattern and distribution of iron and steel industry.

Q4) Explain the problems and prospects of any two industrial regions in Japan.

Q5) Describe the general characteristics of industrial regions in India.

Q6) Explain the role of socio-economic factors in determining the location of industries.

Q7) Write notes (Any two) :

- a) Agglomeration of industries.
- b) Role of software industry in India.
- c) Distribution of chemical industries.



Total No. of Questions : 7]

SEAT No. :

P930

[Total No. of Pages : 1

[5435]-30

M.A./M.Sc (Semester - II)

GEOGRAPHY

Gg - 223 : Geography of Rural Settlements

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Define rural settlements and Explain evolution of settlements in different parts of the world.

Q2) What is dispersion of settlements? Describe factors influencing dispersion with suitable examples.

Q3) Critically examine Von Thunen's Model.

Q4) What is morphogenesis? Explain socio-cultural morphogenesis of rural settlements.

Q5) Describe the various factors affecting rural house types.

Q6) "Population and Environment are the vital aspects of rural development Planning" Discuss.

Q7) Write notes (any two) :

- a) Central place theory.
- b) Causes and consequences of Migration In rural areas.
- c) Settlement patterns in Maharashtra.



Total No. of Questions : 7]

SEAT No. :

P931

[Total No. of Pages : 1

[5435]-30A

M.A./M.Sc.

GEOGRAPHY

Gg - 224 : Geoinformatics - II

(2008 Pattern) (Paper - II) (Semester - II)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Discuss the significance of published data, reports and maps as data source in Geoinformatics.

Q2) Define remote sensing. Describe various laws of radiation.

Q3) Give an account of flight planning, scale, resolution and overlaps.

Q4) Describe and elaborate different methods of measurement of scale and height on an aerial photograph.

Q5) Give an account of different types of sensors.

Q6) Describe various elements of interpretation of satellite images and aerial photographs.

Q7) Write notes (any two) :

- a) Concept of black body radiation.
- b) Space segment of GPS.
- c) Types of scattering.



Total No. of Questions : 7]

SEAT No. :

P932

[Total No. of Pages : 1

[5435]-31

M.A./M.Sc. (Semester - III)

GEOGRAPHY

Gg - 301 : Theoretical and Applied Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures / maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) Give a brief account of the contribution of Arab school of thought to the development of Geographical thought.

Q2) Discuss the deterministic and possibilistic views in Geography.

Q3) Write an essay on systems approach in Geography.

Q4) Define 'models' and discuss various types of models .

Q5) Explain the significance of field survey, process studies and experimental studies in Geography.

Q6) Write an essay on the application of geographical concepts and techniques in regional planning.

Q7) Write notes on any two :

- a) Contribution of 'Ptolemy' in Geography.
- b) Computer based Cartography.
- c) Application of Geographical concepts in scenic evaluation.



Total No. of Questions : 7]

SEAT No. :

P933

[Total No. of Pages : 1

[5435]-32

M.A./M.Sc. (Semester - III)

GEOGRAPHY

Gg - 310 : Coastal Geomorphology
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures / maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) Define wave and discuss the process of shoaling. Describe the types of breakers.

Q2) Describe fossil beach ridges, beach rock and abandoned sea cliffs as indicators of former sea level change.

Q3) Give an account of wave induced and tide induced currents and explain flood and ebb currents in detail.

Q4) Give the types of coastal sediments and explain coastal erosion and sea floor as a source of coastal sediments.

Q5) Write an explanatory note on wave dominated erosional coastal environment.

Q6) Give an account of sea level rise as a current coastal issue.

Q7) Write notes on any two :

- a) Genetic classification of coasts.
- b) Tides and coastal landforms.
- c) Coastal sand dunes.



Total No. of Questions : 7]

SEAT No. :

P934

[Total No. of Pages : 1

[5435]-33

M.A./M.Sc. (Semester - III)
GEOGRAPHY (Special Paper - I)
Gg - 311 : Applied Climatology
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) List different forms of precipitation and describe various instruments used to measure precipitation.

Q2) Describe the influence of climate on crops and livestock.

Q3) What is global environmental change? Explain different aspects of pollution in cities.

Q4) Describe how industrial and commercial activities are sensitive to weather.

Q5) Give an account of use of remote sensing in agriculture.

Q6) Discuss the role of climate in land and water transport.

Q7) Write notes on any two :

- a) Solar variability and climate change.
- b) Climate impact assessment.
- c) Radiation laws.



Total No. of Questions : 7]

SEAT No. :

P935

[Total No. of Pages : 1

[5435]-34

M.A./M.Sc (Semester - III)

GEOGRAPHY

Gg - 312 : Trade and Transport Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Give an account of contribution made by different scholars in the development of trade and transport Geography.

Q2) Explain in detail the significance and various characteristics of airways as a mode of transportation.

Q3) Discuss various factors affecting the growth of seaports with suitable examples.

Q4) Describe the various measures of accessibility in transport network.

Q5) Give an account of major trade areas and economic blocks in the world.

Q6) Discuss the various geographical factors influencing the international trade.

Q7) Write notes on any two :

- a) Functional approach in trade and transport Geography.
- b) Traffic flow in transport network.
- c) Modern Theory of Trade.



Total No. of Questions : 7]

SEAT No. :

P936

[Total No. of Pages : 1

[5435]-35

M.A/M.Sc. (Semester - III)

GEOGRAPHY

Gg - 313 : Urban Geography

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencil is allowed.*

Q1) Describe in brief the various factors leading to modern urbanisation.

Q2) Critically examine the Park and Burgess model of urban structure.

Q3) Describe the characteristics of urban populations.

Q4) Correlate the concepts of rank size relationship and hierarchy of urban settlements.

Q5) "Urban sprawl and the emergence of megalopolis are the out come of modern technologies". Discuss.

Q6) Describe the elements of city plan and the master plan of towns.

Q7) Write notes on any two :

- a) The nature of urban geography.
- b) Approaches to urban classification.
- c) Problems of urban civic amenities.



Total No. of Questions : 7]

SEAT No. :

P937

[Total No. of Pages : 1

[5435]-36
M.A./M.Sc. (Semester - III)
GEOGRAPHY
Gg - 314 : Geoinformatics - III
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Use of map stencil and calculator is allowed.*

Q1) Write an account of different interpolation techniques to generate surfaces.

Q2) What types of errors will you encounter during image rectification? Explain in detail.

Q3) Briefly explain the conceptual basis of georeferencing.

Q4) Describe density slicing, spatial filtering and edge enhancement as image enhancement techniques.

Q5) Explain the parallelepiped classifier. What are the advantages and disadvantages of this classification technique?

Q6) Define the term Radar, SLR and LIDAR. Describe the significance of Radar remote sensing.

Q7) Write short notes on any two :

- a) Confusion matrix.
- b) Geometric correction of an image.
- c) Concept of thermal remote sensing.

▽▽▽▽

Total No. of Questions : 7]

SEAT No. :

P938

[Total No. of Pages : 2

[5435]-37

M.A./M.Sc. (Semester - III)

GEOGRAPHY

Gg - 320 : Multivariate Statistics
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Write any four questions.
- 2) All questions carry equal marks.
- 3) Draw figures/maps wherever necessary.
- 4) Use of map stencils is allowed.

- Q1) a) Differentiate between Bivariate and multivariate data. [4]
b) Find the determinant of following matrices inverse of the following matrices. [8]

$$\begin{pmatrix} 0.5 & 0.8 \\ 0.9 & 2.0 \end{pmatrix}, \begin{pmatrix} 1 & 3 & 2 \\ 3 & 2 & 1 \\ 0 & 0 & 1 \end{pmatrix}, \begin{pmatrix} 5 & 6 & 7 & 8 \\ 1 & 4 & 3 & 2 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{pmatrix}$$

- c) Find the unknowns in the following simultaneous equations using matrix solutions [8]

$$4x + 5y + z = 22$$

$$x + y + z = 08$$

$$x + 2y + 3z = 18$$

$$2x + y + 3z = 18$$

- Q2) Find and plot the quadratic equation from the following data [20]
(x - Distance in km, y - Height in m)

x =	1	2	3	4	5	6	7
y =	1	1	2	4	5	2	1

P.T.O.

Q3) Find second order multiple regression equation. Calculate explained variance. **[20]**

X1	1	2	3	4	5	6	7
X2	10	12	13	18	09	08	06
Y	3	4	5	9	8	3	2

Q4) Find the linear trend surface equation and plot the trend to suitable scale. (Z - Height of trees in meters) **[20]**

X	1	3	1	3	4	5	6	6	7
Y	1	2	5	4	6.5	3	5.5	8	9
Z	6	5	4	6	3	2	2	3	4

Determine the explained variance of the equation.

Q5) Extract the first principal component, from the following matrix of correlations. Calculate eigen value and explained variance. **[20]**

	a	b	c	d	e
a	1	0.7	0.8	0.5	0.4
b		1	0.4	0.3	0.3
c			1	0.2	0.1
d				1	0.5
e					1

Q6) Find first factor, write its equation and calculate explained variance for the following matrix of correlations. **[20]**

	X1	X2	X3	X4	X5
X1	1	0.4	-0.8	-0.7	0.6
X2		1	-0.2	-0.1	0.8
X3			1	0.9	-0.1
X4				1	-0.3
X5					1

Q7) Write explanatory notes on any two **[2 × 10 = 20]**

- Nature of curvilinear bivariate relationship.
- Component scores
- Data reduction and simplification.

▽▽▽▽

Total No. of Questions : 7]

SEAT No. :

P939

[Total No. of Pages : 1

[5435]-38
M.A./M.Sc. (Semester - I)
GEOGRAPHY
Gg - 321 : Political Geography
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Draw figures/maps wherever necessary.*
- 4) Use of map stencils is allowed.*

Q1) Give an account of historical development of Political geography.

Q2) Describe the global geo-strategic views of Halford Mackinder.

Q3) Classify the resources and explain how they influence the power of a Nation.

Q4) Give an account of geopolitical importance of Indian Ocean.

Q5) Differentiate between the State and Nation.

Q6) What are the issues of stability and instability in Indian state politics?

Q7) Write notes on any two :

- a) Frontiers and boundaries.
- b) Functional approach in Political Geography.
- c) Language disputes in India.



Total No. of Questions : 7]

SEAT No. :

P940

[Total No. of Pages : 1

[5435]-39
M.A./M.Sc. (Semester - III)
GEOGRAPHY
Gg - 322 : Soil Geography
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Use of map stencils is allowed.*

Q1) Bring out the relationship between hydrology and soils giving suitable examples.

Q2) Describe topography, parent material and time as factors of Soil formation.

Q3) Describe Soil texture, Soil pH and humus content as physical, chemical and biochemical properties of Soils.

Q4) Describe development of Soil profile giving different soil horizons.

Q5) Explain the Significance of physical weathering in development of Soils.

Q6) Describe the classification of Soils on the basis of land capability.

Q7) Write notes on any two :

- a) Deforestation and Soil degradation.
- b) Soil Permeability.
- c) Cation - Anion exchange in Soil.



Total No. of Questions : 7]

SEAT No. :

P941

[Total No. of Pages : 1

[5435]-41
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 401 : Resource Management
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any Four questions.*
- 2) All questions carry equal marks.*
- 3) Draw figures/maps wherever necessary.*

- Q1)* What is resource management? Describe the various approaches to resource management. **[20]**
- Q2)* Explain the various bases of classification of resources. **[20]**
- Q3)* Discuss the methods of soil conservation. **[20]**
- Q4)* Write a geographical essay on population as a resource. **[20]**
- Q5)* Write a geographical essay on integrated resource management. **[20]**
- Q6)* Describe the distribution and policies of development related to water resources of India. **[20]**
- Q7)* Write notes (Any Two) : **[20]**
- a) Physical resources.
 - b) Conservation of mineral resources.
 - c) Integrated resource management.



Total No. of Questions : 7]

SEAT No. :

P942

[Total No. of Pages : 1

[5435]-42

M.A./M.Sc. (Semester - IV)

GEOGRAPHY

**Gg - 420 : Regional Planning And Development
(2008 Pattern)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Define regional planning. Explain the scope of Regional planning.

Q2) Discuss with suitable examples techno-economic and diagnostic surveys in regional planning.

Q3) Elaborate Methodology for regional planning.

Q4) Discuss regional development and planning strategies with respect to developed countries.

Q5) Give an account of multi level planning in India.

Q6) Discuss regionalisation for planning of common areas and river basins.

Q7) Write notes (Any Two) :

- a) State level planning.
- b) Concentration versus dispersal.
- c) Regional surveys.

▽▽▽▽

Total No. of Questions : 7]

SEAT No. :

P943

[Total No. of Pages : 1

[5435]-43
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 421 : Geography of Water Resources
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any Four question.*
- 2) All questions carry equal marks.*
- 3) Use of map stencils is allowed.*

Q1) Give an account of distribution of worlds surface and sub-surface water resources.

Q2) Discuss industrial demand of water and industrial water pollution.

Q3) Discuss various water harvesting techniques as a step taken for soil and water conservation.

Q4) Outline the major problems associated with water resources.

Q5) Discuss various measures of water management in drought prone areas.

Q6) Write an account of international and inter-state water disputes with reference to India.

Q7) Write notes (Any Two) :

- a) Integrated basin planning.
- b) Water pollution and treatment.
- c) Farakka barrage.



Total No. of Questions : 7]

SEAT No. :

P944

[Total No. of Pages : 1

[5435]-44
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 422 : Biogeography
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of the map stencils is allowed.*

Q1) Discuss the relevance of study of biogeography with spatial context.

Q2) Explain the evolution and adaptation processes with suitable examples.

Q3) Describe the general distribution pattern of biodiversity.

Q4) "Physical limitations of life affect the nature and extent of ecosystem". Explain.

Q5) Write a note on variety of island habitats and associated problems.

Q6) Discuss the biogeography pattern and importance of evergreen forest biome.

Q7) Write notes on (Any Two) :

- a) Eco-geographic trends.
- b) Plant and animal life of Gondwanaland and Laurasia.
- c) Pattern of rarity.



Total No. of Questions : 7]

SEAT No. :

P945

[Total No. of Pages : 1

[5435]-45
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 423 : Geography and Ecosystem
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures/maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) What is ecosystem? Describe various components of ecosystem.

Q2) Mention major terrestrial ecosystems of the world and explain grassland ecosystem in detail.

Q3) Discuss in detail man's impact on ecosystem as a result of modern technological advancement.

Q4) What is biodiversity? Explain various methods of conservation of biodiversity.

Q5) Discuss big dams as a man made ecosystems with reference to Sardar Sarovar project.

Q6) Describe Environmental Protection Act of India.

Q7) Write notes (Any Two) :

- a) Carrying capacity of the earth.
- b) Eco tourism.
- c) Uniformitarianism and life on earth.

▽▽▽▽

Total No. of Questions : 7]

SEAT No. :

P946

[Total No. of Pages : 1

[5435]-46
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 424 : Research Methodology
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures/maps wherever necessary.*

Q1) Define surveying and explain geodetic and plane survey with examples.

Q2) Explain the indexing system of SOI toposheets with diagrams.

Q3) Discuss the elements of image interpretation.

Q4) Differentiate between bivariate and multivariate correlation with examples.

Q5) Evaluate the use of GIS in spatial data analysis and modeling.

Q6) Discuss the importance of survey of literature and research methods applied in report writing.

Q7) Write Notes (Any Two) :

- a) Importance of questionnaire.
- b) Testing of hypothesis.
- c) Data base creation from toposheets.



Total No. of Questions : 7]

SEAT No. :

P947

[Total No. of Pages : 1

[5435]-47

M.A./M.Sc. (Semester - IV)

GEOGRAPHY

**Gg - 430 : Social and Cultural Geography
(2008 Pattern)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map/stencils is allowed.*

Q1) What is 'Social Geography'? Differentiate the various views contributed by different Social geographers in the development of Social Geography.

Q2) Write the details of various bases of differentiation between Social Geography and Cultural Geography.

Q3) Explain with examples how space and society are interrelated to each other.

Q4) What do you mean by Social groups? Discuss the similarities and dissimilarities between primary and secondary social groups on the basis of social structure.

Q5) Critically examine the role of race, caste and religion in the cultural diversity.

Q6) Which are the indicators of social well being? Explain the various methods of measuring social well being.

Q7) Write notes (Any Two) :

- a) Social Infrastructure.
- b) Concept of social welfare.
- c) Impact of technology on settlement.

▽▽▽▽

Total No. of Questions : 7]

SEAT No. :

P948

[Total No. of Pages : 1

[5435]-48
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 431 : Computer Geography
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *All questions carry equal marks.*
- 2) *Attempt any four questions.*
- 3) *Use of calculator and statistical table is allowed.*

Q1) Discuss the applications of computer techniques in physical geography.

Q2) Explain the Anatomy of computer in detail.

Q3) Describe the role of language, software and internet in computer studies.

Q4) "Corel photo-paint is an useful software for map making". Discuss.

Q5) Define GIS. Correlate the role of Auto CAD and GIS in map-making.

Q6) Write an account of types of graphical representation that can be performed in MS-Excel.

Q7) Write Notes (Any Two) :

- a) Corel DRAW.
- b) Windows Operating System.
- c) Digitization.



Total No. of Questions : 7]

SEAT No. :

P949

[Total No. of Pages : 1

[5435]-49
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg. - 432 : Oceanography
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Draw figures/maps wherever necessary.*

Q1) Discuss the foundation of modern Oceanography and modern trends of Oceanography.

Q2) Discuss in detail concept of sea floor spreading.

Q3) Explain in detail of the ocean bottom with respect to abyssal plains and oceanic trenches.

Q4) What is meant by seismic waves? Discuss in detail Tsunami and storm surges.

Q5) Define tides. Discuss the Dynamic theory of tides.

Q6) Give an account of sediments on the ocean floor with respect to biogenous and hydrogenous particles.

Q7) Write notes (Any Two) :

- a) Carbon dioxides and carbonate cycles.
- b) Tide generating forces.
- c) Causes of oceanic currents.



Total No. of Questions : 7]

SEAT No. :

P950

[Total No. of Pages : 1

[5435]-50

M.A./M.Sc. (Semester - IV)

GEOGRAPHY

**Gg. - 433 : Natural And Man-made Hazards
(2008 Pattern)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of map stencils is allowed.*

Q1) Give an account of risk and vulnerability assessment.

Q2) Give an account of floods as a hazards.

Q3) What are geomorphic hazards? Describe the areas affected by landslides and subsidence.

Q4) Discuss the impact of large river projects with suitable examples.

Q5) Discuss the effects of thermal and hydel power stations with reference to India.

Q6) Discuss effects of global warming with suitable examples.

Q7) Write notes (Any Two) :

- a) Flash floods.
- b) Hydrological cycle.
- c) Disaster management.



Total No. of Questions : 7]

SEAT No. :

P951

[Total No. of Pages : 1

[5435]-51
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 441 : Regional Geography of Europe
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Draw figures/maps wherever necessary.*

Q1) Explain the geological structure of Europe.

Q2) Describe the problems and prospects of agriculture in Europe.

Q3) Explain the impact of globalisation on international trade and transportation.

Q4) Write a geographical essay on "Industrial development in Europe".

Q5) Explain the growth and distribution of urban settlements in Europe.

Q6) Discuss the role of tourism in economic development of European countries.

Q7) Write note (Any Two) :

- a) Major soil types in Europe.
- b) Population composition of Europe.
- c) Major climatic types of Europe.



Total No. of Questions : 7]

SEAT No. :

P952

[Total No. of Pages : 1

[5435]-52

M.A./M.Sc. (Semester - IV)

GEOGRAPHY

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

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures/maps wherever necessary.*

Q1) Describe physiographic structure of south-east Asia. **[20]**

Q2) Explain with example climatic types and characteristics of south east Asia. **[20]**

Q3) Give an account of agricultural types and problems in south east Asia. **[20]**

Q4) Describe factors affecting growth and distribution of population in south-east Asia. **[20]**

Q5) Explain the problems associated with urbanisation in south-east Asia. **[20]**

Q6) Explain the development of Tourism and its importance in south-east Asia. **[20]**

Q7) Write notes (Any Two) : **[20]**

- a) The military regime in Myanmar.
- b) Plantation agriculture in south-east Asia
- c) Internal Trade of south-east Asia.



Total No. of Questions : 7]

SEAT No. :

P953

[Total No. of Pages : 1

[5435]-53
M.A./M.Sc.
GEOGRAPHY
Gg - 443 : Regional Geography of North America
(2008 Pattern) (Semester - IV)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Use of map stencils is allowed.*

Q1) Discuss the geostrategic importance of North America.

Q2) Give an account of geological setting of North America.

Q3) Give an account of energy resources of North America.

Q4) Discuss various problems of Industrialization in North America.

Q5) Give an account of development of transportation in North America.

Q6) Discuss trends of development of tourism in North America.

Q7) Write notes on any two :

- a) USA and Canada relationship.
- b) Ethnic diversion in North America.
- c) Types and distribution of Vegetation in North America.



Total No. of Questions : 7]

SEAT No. :

P954

[Total No. of Pages : 1

[5435]-54
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg. - 444 : Geography of Japan
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw figures/maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) Describe relief features of Japan.

Q2) Explain types of climate and associated weather condition of Japan.

Q3) Give an account of agricultural problems and prospects of Japan.

Q4) Explain the factors affecting industrial development of Japan.

Q5) Describe the government policies affecting export and import of Japan.

Q6) Explain the role of national and international policies in the development of Japan.

Q7) Write notes (Any Two) :

- a) Problems and prospects of fishing industry in Japan.
- b) Population composition of Japan.
- c) Types and management of hazards in Japan.



Total No. of Questions : 7]

SEAT No. :

P955

[Total No. of Pages : 1

[5435]-55
M.A./M.Sc. (Semester - IV)
GEOGRAPHY
Gg - 445 : Geography of India
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions.*
- 2) All questions carry equal marks.*
- 3) Draw figures/maps wherever necessary.*

Q1) Discuss the physiography of peninsular plateau of India.

Q2) Divide India into major climatic regions and gives their salient features in brief.

Q3) Critically examine the soil conservation in India.

Q4) Give a detailed account of distribution and Utilisation of iron-ore in India.

Q5) Write a geographical essay on production of rice in India.

Q6) Critically evaluate the problem of population growth and distribution in India.

Q7) Write notes (Any Two) :

- a) Geological structure of India.
- b) Conservation of forests in India.
- c) Development of engineering industry in India.

