

Total No. of Questions : 7]

SEAT No. :

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P1598

[5228]-12

M.A./M.Sc.

GEOGRAPHY

**Gg-102 : Principles of Climatology
(2008 Pattern) (Semester-I)**

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 the development of Modern Climatology.

Q2) State the composition of atmosphere and explain vertical structure of atmosphere with a suitable diagram.

Q3) What is Heat Budget? Explain the heat budget of the earth.

Q4) Describe in short various scales of atmospheric motions. Discuss in detail the tricellular theory of atmospheric motion.

Q5) How is humidity measured? Describe the Hydrological Cycle.

Q6) What is an air mass? Explain classification and modifications of air masses.

Q7) Write notes on any two:

- a) Inversion of Temperature
- b) Geostrophic wind
- c) Dry and wet adiabatic lapse rate



Total No. of Questions :7]

SEAT No. :

[Total No. of Pages :1

P1599

[5228] - 13

M.A./M.Sc.

GEOGRAPHY

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

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 economic geography? Describe its nature and scope.

Q2) Trace out the history of evolution of economic landscape.

Q3) Describe the Von Thunen Model.

Q4) What is a resource? Give the significance of natural resources in economic development.

Q5) Write a geographical essay on land, labour and capital as factors of production.

Q6) Explain various measures of economic development.

Q7) Write notes on any two :

- a) Types of hypothesis.
- b) Economic factors influencing international trade.
- c) Economic development in India after independence.



Total No. of Questions : 7]

SEAT No. :

P1600

[5228]-14

[Total No. of Pages : 2

M.A./M.Sc.

GEOGRAPHY

**Gg : 104 : Principles of Population and Settlement Geography
(2008 Pattern) (Semester - I)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) Attempt any four questions*
- 2) All questions carry equal marks*
- 3) Use maps and diagrams wherever necessary. Use of Stencil is allowed.*

Q1) How does population geography differ from settlement geography? Discuss the contents and methodologies adopted in population geography.

Q2) Discuss the five basic concepts used in central place theory and the derivation of hexagonal shape of the settlement. Derive K3, K4 and K7 value of the same.

Q3) What are the factors that affect the growth and development of rural settlements? Review the process of settling of rural settlements in the Indian scenario from the pre historic to modern period.

Q4) Give five definitions of urban places as given by countries of the world. Analyze the trend of urbanization in less developed Countries of the world and highlight some of the characteristics of the same.

Q5) “World population distribution is attributed to environmental, socio- economic and demographic factors” Justify.

P.T.O.

Q6) “In the present context, Demographic transition is more relevant than Malthus”. Is the statement true or false? Discuss at least five evidences to prove the same.

Q7) Write notes on any two:

- a) Metropolitisation as an urban process.
- b) Nodality and centrality.
- c) Degree of dispersion and Rank size distribution.



Total No. of Questions : 7]

SEAT No. :

P1601

[5228]-21

[Total No. of Pages : 3

M.A./M.Sc.

GEOGRAPHY

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

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *Use of calculator and statistical table are allowed.*
- 3) *The figures in the right hand side bracket indicate full marks.*

Q1) a) Write a note on nominal and ordinal scale. **[6]**

b) Calculate skewness for the given data and comment on the results. **[14]**

Class	0-10	10-20	20-30	30-40	40-50
Frequency	2	2	6	11	6

Q2) a) Write a note on kurtosis. **[6]**

b) According to the United States Census Bureau, 26.3% of all households have three or more cars. If a sample of 20 households are selected at random, what is the probability for having three or more cars for **[14]**

- i) 2 households
- ii) 4 households
- iii) 5 households
- iv) Exactly 5 households.

Q3) a) Write a note on degrees of freedom. **[6]**

b) The following table gives data of production of wheat (in millions metric tons) of India from 2005 to 2012. Using least-square method, obtain a line of best fit. **[14]**

Estimate production of wheat for year 2013.

Year	2005	2006	2007	2008	2009	2010	2011	2012
Production	72.0	69.4	74.9	78.6	80.7	80.7	86.9	94.9

P.T.O.

Q4) a) Write a note on types of statistics. **[6]**

b) Data are gathered for five cars in a car mall, regarding number of kilometers driven in a given year and maintenance costs in rupees for that year. Obtain the regression equation, plot the regression line and scatter plot. **[14]**

Kilometers driven (X)	128000	46400	84800	20800	72000
Maintenance costs (Y)	73716	9214	39929	12286	19965

Q5) a) Meaning of unbiased random sample. **[6]**

b) Apply the Chi-square test to find out whether there is difference between the working status and marital status at a significance level of 0.05. **[14]**

Marital status →	Married	Widowed or divorced	Unmarried
Working status ↓			
Employed	679	103	114
Unemployed	63	10	20
Business man	42	18	25

Q6) The following data on calcium content of wheat are consistent with summary quantities. Three different storage times were considered. Is there sufficient evidence to conclude that the mean calcium content is not the same for the three different storage times? Perform the analysis of variance (ANOVA) (F Test) to test the hypothesis at the 0.05 level. **[20]**

		Observations		
Storage Time	1 month	58.87	56.43	56.51
	2 months	59.13	60.38	58.01
	3 months	62.32	58.76	60.03

Q7) Write notes on any two:

[20]

- a) Binomial Probability Distribution.
- b) Trends and periodicity.
- c) Grouped and ungrouped data.



Total No. of Questions : 7]

SEAT No. :

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P1602

[5228]-22

M.A./M.Sc.

GEOGRAPHY

**Gg-210 : Tropical Geomorphology
(2008 Pattern) (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 effects of climatic parameters on the tropical environment.

Q2) Discuss the factors affecting chemical weathering in the tropical environment.

Q3) Describe the landforms associated with lateritic terrain and give the distribution of laterites in India.

Q4) Explain the process of chemical denudation.

Q5) Discuss the nature of tropical terrain with respect to relief characteristics and hill slopes.

Q6) Describe the formation of peneplains and pediplains in the tropics.

Q7) Write notes on any two:

- a) Solubility and mobility of minerals in the tropics.
- b) Mass movements in tropics.
- c) Quaternary change in climate and vegetation.



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P1603

[5228]-23

M.A./M.Sc.

GEOGRAPHY

**Gg-211 : Synoptic Climatology
(2008 Pattern) (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) Critically discuss the different levels of climatological synthesis.

Q2) Discuss the environmental impact of severe weather phenomenon.

Q3) How are clouds formed? Attempt a detailed classification of clouds.

Q4) How are easterly waves formed? Describe their characteristics.

Q5) Bring out the importance of satellites in weather forecasting.

Q6) Give an account of the air masses of North America and their impact on the regional climate.

Q7) Write notes on any two:

- a) Easterly waves.
- b) Western Disturbances.
- c) Synoptic climatology : Application in Aviation.



Total No. of Questions : 7]

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[Total No. of Pages : 1

P1604

[5228]-24

M.A./M.Sc.

GEOGRAPHY

**Gg-212 : Agriculture Geography
(2008 Pattern) (Semester-II)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

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

Q1) Give an account of origin and dispersal of agriculture.

Q2) Explain the significance of agriculture in India.

Q3) Explain the role of physical factors in determining agricultural patterns.

Q4) Distinguish between intensive and extensive types of agriculture.

Q5) Define agricultural regionalization and explain Bhatia's method of agricultural regionalization.

Q6) Explain the prospects of irrigation in dry farming.

Q7) Write notes on any two:

- a) Kendall's Ranking Coefficient.
- b) Land classification in India.
- c) Mixed farming.



Total No. of Questions : 7]

SEAT No. :

[Total No. of Pages : 1

P1605

[5228]-25

M.A./M.Sc.

GEOGRAPHY

**Gg-213 : Population Geography
(2008 Pattern) (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) Define population geography, discuss its scope and recent trends.

Q2) Give a detailed account of Demographic Transition Theory.

Q3) Describe the recent fertility differences in developed and developing countries with examples.

Q4) Explain mortality levels and trends in developing countries.

Q5) Discuss population compositions and explain any four components of population composition.

Q6) Describe factors responsible for spatial variation of population growth.

Q7) Write notes on any two:

- a) World population projection.
- b) Population policy of India.
- c) Law of migration.



Total No. of Questions : 7]

SEAT No. :

[Total No. of Pages : 1

P1606

[5228]-26

M.A./M.Sc.

GEOGRAPHY

**Gg-214 : Geoinformatics - I
(2008 Pattern) (Semester-II) (Paper-I)**

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) Give an account on the developmental history of GIS.

Q2) Describe with proper examples nominal, ordinal, ratio and cyclic scales in GIS.

Q3) Distinguish between spatial and non spatial data models in GIS and explain the significance of vector data models.

Q4) What is digitizing? Explain in detail various types of digitizers.

Q5) Discuss in detail different theories used for data analysis in GIS.

Q6) What is SQL? Explain spatial query analysis in GIS.

Q7) Write notes on any two:

- a) Concept of Space and time in GIS.
- b) Layers and Coverage.
- c) Map Algebra.



Total No. of Questions : 7]

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P1607

[5228]-27

M.A./M.Sc.

GEOGRAPHY

**Gg-220 : Fluvial Geomorphology
(2008 Pattern) (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 in detail Glock's model of drainage network.

Q2) Elaborate the concept of shear stress and stream power.

Q3) Define hydraulic geometry. Explain the 'at a station and downstream hydraulic geometry' of a channel.

Q4) Explain the channel 'cross sectional morphology' and 'reach morphology'.

Q5) Describe the characteristics of sand bed, gravel bed and bed rock channels.

Q6) Explain the processes of fluvial erosion and discuss the types of erosion.

Q7) Write notes on any two:

- a) Flood plains.
- b) Quaternary fluvial systems.
- c) Uniform and non-uniform flow.



Total No. of Questions : 7]

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P1608

[5228]-28

M.A./M.Sc.

GEOGRAPHY

**Gg-221 : Monsoon Climatology
(Semester-II)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

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

Q1) Define Monsoon Climatology? Give an account of development of monsoon climatology.

Q2) Give an account of monsoon of East Asia.

Q3) Give an account of compressibility of atmosphere and annual cycle of summer monsoon.

Q4) Give an account of sea level pressure patterns.

Q5) Give an account of main rain bearing systems.

Q6) Describe decadal & centurial long period trends in Indian monsoon.

Q7) Write short notes (any two):

- a) ENSO Indicator.
- b) Walker circulation.
- c) Tibetan Anticyclone.



Total No. of Questions : 7]

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P1609

[5228]-29

M.A./M.Sc.

GEOGRAPHY

**Gg-222 : Industrial Geography
(Semester-II)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

- 1) *Attempt any five questions.*
- 2) *All questions carry equal marks.*
- 3) *Draw neat diagrams wherever necessary.*

Q1) Discuss the geographical, economical and socio-cultural basis of industrial location.

Q2) Discuss in detail the industrial location theory of Greenhut.

Q3) Describe the distributional pattern and problems of Automobile industry in India.

Q4) Describe the distribution, locational factors and problems of industrial regions of Japan.

Q5) Explain the role of software industry in India.

Q6) What is nature of problems and prospectus of industrial regions in India.

Q7) Write short notes on any TWO:

- a) Characteristics of centralization.
- b) Regional economies.
- c) Nature of the Industrial Geography.



Total No. of Questions : 7]

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P1610

[5228]-30

M.A./M.Sc.

GEOGRAPHY

**Gg-223 : Geography of Rural Settlement
(2008 Pattern) (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) Describe the evolution of settlements in different parts of the world.

Q2) What is nucleation? Describe the factors of nucleation of settlements with suitable examples.

Q3) Critically examine Von Thunen's model with suitable examples.

Q4) Describe functional growth and socio-economic transformation in rural areas.

Q5) Describe age-sex and occupational structure of rural settlements.

Q6) Describe rural settlement patterns and house types in Maharashtra.

Q7) Write notes on (any two):

- a) Morphogenesis of rural settlements.
- b) Seasonal migration.
- c) Rural development planning.



Total No. of Questions : 7]

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P1611

[5228]-30A

M.A./M.Sc.

GEOGRAPHY

**Gg-224 : Geoinformatics - II
(2008 Pattern) (Semester-II) (Paper-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) Explain with suitable examples remote sensing data as a major data source.

Q2) What is EMR (Electromagnetic radiation)? Describe laws of radiation.

Q3) Explain atmosphere and surface interaction with reference to scattering, Reflections and Absorption.

Q4) Describe various types of camera and discuss the various components of an aerial camera.

Q5) Discuss the factors governing the interpretability of a satellite image and mention elements of visual interpretation of satellite image.

Q6) What do you understand by the GPS? Explain the mechanism of GPS signals with respect to receivers.

Q7) Write notes on any two:

- a) Geometric characteristics of an aerial photograph.
- b) Geosynchronous satellites.
- c) MSS.



Total No. of Questions : 7]

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P1612

[5228]-31

M.A./M.Sc.

GEOGRAPHY

**Gg - 301 : Theoretical and Applied Geography
(2008 Pattern) (Semester - III)**

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 stencil is allowed.*

Q1) Give an account of contributions by German geographers to the development of geography.

Q2) What is dualism in geography ? Discuss dualism in geography with reference to physical versus human geography.

Q3) Define models and describe the types of models used in geography.

Q4) Explain the structure, elements and relationships in systems approach with examples.

Q5) Discuss the importance of remote sensing and GIS techniques in geography.

Q6) Discuss the application of geographical concepts and techniques in regional and urban planning.

Q7) Write notes on any two of the following.

- a) Contributions of Greeks to the development of geography.
- b) Field survey as a scientific method.
- c) Significance of applied geography.



Total No. of Questions : 7]

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P1613

[5228]-32

M.A./M.Sc.

GEOGRAPHY

**Gg-310 : Coastal Geomorphology
(2013 Pattern) (Semester-III)**

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) Discuss the spatial and temporal scales in coastal geomorphology.

Q2) Give an account of 'wave induced and tide induced currents' and explain flood and ebb currents in detail.

Q3) Discuss various indicators of former sea levels.

Q4) Describe various sources of sediments and pathways of sediment transport.

Q5) Give an account of classification of coastal deltas.

Q6) What are beaches and spits? Explain with reference to their profiles, types and Sediments.

Q7) Write notes on any two:

- a) Genetic coastal classification
- b) Mangrove swamps and salt marshes
- c) Sea level rise a current coastal issue



Total No. of Questions : 7]

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P1614

[5228]-33

M.A./M.Sc.

GEOGRAPHY

**Gg-311 : Applied Climatology
(2008 Pattern) (Semester-III)**

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 a brief account of development of applied Climatology and explain climate impact assessment.

Q2) Explain radiation laws. Describe different instruments used to measure radiation.

Q3) Discuss in detail the relationship between evaporation and evapo-transpiration with suitable examples. Explain any two instruments to measure evapo-transpiration.

Q4) Explain nature of urban climate and its impact on GEC.

Q5) Explain the effects of climate on land and water transport.

Q6) Give an account of reconstruction of past Climate with reference to Plate tectonics.

Q7) Write notes on any two:

- a) Climate and soil management
- b) Remote sensing in meteorological monitoring
- c) Ocean floor sediments



Total No. of Questions : 7]

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P1615

[5228]-34

M.A./M.Sc.

GEOGRAPHY

**Gg-312 : Trade and Transport Geography
(2008 Pattern) (Semester-III)**

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 significance of transportation in world and regional economies.

Q2) Explain the characteristics and significance of roadways.

Q3) Describe the political and economic factors associated with the growth of seaports.

Q4) Explain how the problems of urban transportation are responsible for environmental degradation.

Q5) Describe the development and significance of trade in the world.

Q6) Discuss the problems and prospects of international trade in the era of globalization.

Q7) Write notes on (any two):

- a) Trade areas and economic blocks
- b) Gravity model
- c) Neo-classical trade theory



Total No. of Questions : 7]

SEAT No. :

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P1616

[5228]-35

M.A./M.Sc.

GEOGRAPHY

**Gg-313 : Urban Geography
(2008 Pattern) (Semester-III)**

Time : 3 Hours]

[Max. Marks : 80

Instructions to the candidates:

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

Q1) Explain the contemporary factors of urbanisation.

Q2) What do you mean by CBD? Describe the characteristics of CBD.

Q3) Explain the criteria used to demarcate the city region.

Q4) Discuss the rank-size relationship and rank-size rule.

Q5) Write a geographical essay on price of land, scarcity of housing and growth of slums.

Q6) “Proper urban policy and development in India is the need of the hour”. Discuss.

Q7) Write notes on Any Two of the following:

- a) Significance of urban geography
- b) Urban morphology
- c) Rural-urban fringe



Total No. of Questions : 7]

SEAT No. :

[Total No. of Pages : 1

P1617

[5228]-36

M.A./M.Sc.

GEOGRAPHY

**Gg-314 : Geoinformatics - III
(2008 Pattern) (Semester-III)**

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) Explain the importance of Grid operations in data analysis.

Q2) Give an account of Network and surface analysis as major components in spatial analysis.

Q3) What is Digital Image Processing? Mention types of systematic and non-systematic errors.

Q4) What is image enhancement? Describe different methods of image enhancement.

Q5) Discuss the ISODATA approach in unsupervised classification in detail.

Q6) What is classification accuracy? Explain user's accuracy and mapping accuracy in detail.

Q7) Write notes on any two:

- a) SRTM
- b) Thermal RS
- c) LIDAR



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SEAT No. :

P1618

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[5228] - 37

M.A./M.Sc.

GEOGRAPHY

Gg-320: Multivariate Statistics

(2008 Pattern) (Semester - III)

Time : 3 Hours]

[Max. Marks :80

Instructions to the candidates:

- 1) *Attempt any four questions.*
- 2) *All questions carry equal marks.*
- 3) *Use of calculators, statistical tables etc. are allowed.*

Q1) a) Differentiate between bivariate and multivariate analysis. **[6]**

b) Find the determinant and the adjoint of the following matrix. **[6]**

$$A = \begin{pmatrix} 2 & 1 & 5 \\ 10 & 3 & 6 \\ 7 & 9 & 2 \end{pmatrix}$$

c) Find the unknowns in the following simultaneous equations using the matrix solution **[8]**

$$a - b + 4c = 30$$

$$6a + 2b - c = 28$$

$$4a + b + c = 30$$

Q2) The values of price levels as observed over a period of one year are recorded in the following table. Using suitable bivariate model express the trend of the data and find the amount of variance explained. **[20]**

Months	1	2	3	4	5	6	7	8	9	10	11	12
Price levels	12.3	15.6	17.2	18.1	20.3	25.2	21.3	18.5	16.2	14.1	11.9	10.3

P.T.O.

Q3) The following table depicts the information for various states. Obtain a multiple regression equation and explained variance for the same and comment on the results. **[20]**

States	Y	X1	X2	X3
A	1.31	17	86.9	21.8
B	1.39	67	52.3	20.3
C	1.77	68	52.5	19.1
D	2.47	83	20.8	16.1
E	2.24	98	26	16.7
F	2.11	75	23.1	16.6

Q4) The information regarding the location of a few retails markets in terms of northings (000 m) and eastings (000 m) along with the price of vegetables is given below. Compute a suitable equation to generate a surface of the price levels observed in the area. **[20]**

Markets	1	2	3	4	5	6	7	8	9	10
Northings	2.7	4.2	6.3	8.9	9.1	10.4	11.0	12.3	15.6	17.2
Eastings	-6.3	-4.8	-2.1	-0.3	1.6	2.8	5.9	7.8	12.3	14.2
Price in Rs/kg	6.2	6.1	8.9	5.3	6.8	4.9	3.2	2.1	12.5	7.2

Q5) Using the following matrix find the first principal components and the variance explained by the components. **[20]**

	X1	X2	X3	X4	X5	X6
X1	1	0.6	0.9	0.35	0.55	0.98
X2		1	0.06	-0.4	0.8	0.54
X3			1	0.7	0.9	0.66
X4				1	0.6	0.7
X5					1	-0.5
X6						1

Q6) Find first factor from the matrix of correlations given in the Q.5 above and find the explained variance. **[20]**

Q7) Write note on any two: **[20]**

- a) Nature of non-linear bivariate functions
- b) Concept of regionalization.
- c) Use of PCA in Geomorphology.

EEE

Total No. of Questions :7]

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[5228] - 38

M.A./M.Sc.

GEOGRAPHY

**Gg-321: Political Geography
(2008 Pattern) (Semester - III)**

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 nature, scope and development of political geography.

Q2) Discuss the various approaches to the study of political geography.

Q3) Explain the concept of Nation and State and differentiate between them.

Q4) Describe the morphological classification of international boundaries.

Q5) Examine the global strategic views of Mackinder.

Q6) Explain the geopolitical significance of SAARC region.

Q7) Write notes on any two:

- a) Unified Field Theory.
- b) Genetic classification of boundaries.
- c) Emergence of new States in India.

EEE

Total No. of Questions :7]

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[5228] - 39

M.A./M.Sc.

GEOGRAPHY

**Gg-322: Soil Geography
(2008 Pattern) (Semester - III)**

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 importance of the study of soil in physical geography.

Q2) Elaborate the different factors affecting soil formation process.

Q3) Describe physical properties of the soil with reference to texture, colour, porosity, soil water and moisture.

Q4) Explain weathering process. Define secondary clay minerals and their distribution in the profile.

Q5) Give an account of United States soil classification.

Q6) Discuss the problems related to soil degradation, give suitable examples.

Q7) Write notes on any two:

- a) Productivity of soil.
- b) Land capability.
- c) Soil horizons.

EEE

Total No. of Questions : 7]

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M.A./M.Sc.

GEOGRAPHY

**Gg - 401 : Resource Management
(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) *Draw figures/maps wherever necessary.*

Q1) Describe the various approaches to resource management. **[20]**

Q2) What is resource management? Describe the management of cultural resources. **[20]**

Q3) How the various aspects of population important in the resource management? **[20]**

Q4) Write an account of application of remote sensing technique in resource appraisal and management. **[20]**

Q5) Write an essay on soil resources of India. **[20]**

Q6) Discuss the development policies of industries in India. **[20]**

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

- a) Classification of resources.
- b) Appraisal of physical resources.
- c) Integrated resource management.



Total No. of Questions : 7]

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M.A./M.Sc.

GEOGRAPHY

**Gg-420 : Regional Planning And Development
(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) What do you understand by regional planning. Explain the process of regional planning.

Q2) Define region. Discuss the importance of surveys for regional planning.

Q3) Discuss various techniques of regional planning.

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

Q5) What is block level planning? Discuss various regional policies in the Indian Five Year Plans.

Q6) Discuss regionalisation for planning with respect to tribal and hilly areas.

Q7) Write notes (Any Two):

- a) Process of regional planning.
- b) National capital region.
- c) Diagnostic surveys.



Total No. of Questions : 7]

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M.A./M.Sc.

GEOGRAPHY

**Gg-421 : Geography of Water Resources
(2008 Pattern) (Semester - IV)**

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) Elaborate different stages and components of hydrological cycle.

Q2) Give an account of water harvesting techniques.

Q3) Discuss the problems associated with abundance and scarcity of water resources.

Q4) Give an account of industrial demand for water and its utilization.

Q5) Discuss various water harvesting techniques as a step taken for soil and water conservation.

Q6) Describe the various measures of conservation and planning for the development of water resources.

Q7) Write notes (Any Two).

- a) Cauvery water dispute.
- b) Agricultural water demand.
- c) Integrated basin planning.



Total No. of Questions : 7]

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GEOGRAPHY

**Gg-422 : Biogeography
(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 the map stencils is allowed.*

Q1) Describe the biogeography patterns with respect to the zoogeographical provinces.

Q2) Explain the speciation and extinction processes with suitable examples.

Q3) Discuss pattern of distribution in context to the endemism and relicts.

Q4) Define the term 'ecological succession' and explain impact of physical limitation on its diversity.

Q5) Discuss the context between the idea of Continental Drift and distribution of plants and animals.

Q6) Discuss the biogeography patterns and importance of the tropical savanna biome.

Q7) Write notes on (Any Two):

- a) History of biogeography.
- b) Hazards of island life.
- c) Microclimates.



Total No. of Questions : 7]

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M.A./M.Sc.

GEOGRAPHY

**Gg-423 : Geography and Ecosystem
(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) *Draw figures/maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) 'Geography as a human ecology'. Discuss.

Q2) State major terrestrial ecosystems of the world and explain agriculture ecosystem in detail.

Q3) Explain the causes of ecological imbalance and discuss the measures to be undertaken to rectify them.

Q4) Elaborate different methods of preservation and conservation of an ecosystem through resource management.

Q5) Examine the ecological and environmental issues related to National Parks.

Q6) Explain Wild Life Act and Forest Act of India.

Q7) Write notes (Any Two):

- a) Trophic levels and food chains.
- b) Biodiversity.
- c) Biotic components of ecosystem.



Total No. of Questions :7]

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GEOGRAPHY

**Gg-424: Research Methodology
(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) Draw figures/maps wherever necessary.*

Q1) What is map projection? Discuss various types of map projection.

Q2) Discuss the data base creation from the toposheets.

Q3) Explain the geometry of vertical aerial photographs with examples.

Q4) Differentiate between descriptive and inferential statistics.

Q5) Discuss the importance of measurement and field mapping in research.

Q6) Evaluate the importance of research methods applied and analysis in report writing.

Q7) Write notes (Any two) :

- a) Use of GIS in modelling.
- b) Data base creation from aerial photographs.
- c) Importance of surveying.



Total No. of Questions :7]

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GEOGRAPHY

**Gg-430: Social and Cultural Geography
(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) Define social and cultural Geography. Explain the trends and development in the social and cultural Geography.

Q2) Critically examine the origin and diffusion of culture with reference to India.

Q3) Write the details of the processes associated with social patterns related to space.

Q4) Explain how the levels of activities are associated with the structure and processes of social groups.

Q5) How language and dialects work as bases of cultural regions? Explain with reference to world.

Q6) What is social well being? Explain the various parameters associated with social well being.

Q7) Write notes (Any Two) :

- a) Social areas in urban settlement.
- b) Concept of social justice.
- c) Health education and social well being.



Total No. of Questions :7]

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M.A./M.Sc.

GEOGRAPHY

**Gg-431: Computer Geography
(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 calculator and statistical table is allowed.*

Q1) Define computer. Explain the application of computers in Cartography and GIS.

Q2) Give an account of Windows operating system.

Q3) Discuss the applications of MS - Paint in map.

Q4) Explain image resampling, cropping and enhancement functions of corel DRAW.

Q5) Write details of 'Methods of Digitization'.

Q6) "MS - Excel is useful application software for data analysis and graphical representation". Discuss.

Q7) Write Notes (Any Two) :

- a) Auto CAD.
- b) Use of Internet.
- c) Input - output devices of computer.



Total No. of Questions :7]

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M.A./M.Sc.

GEOGRAPHY

**Gg-432: Oceanography
(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) *Draw figures/maps wherever necessary.*

Q1) Define Oceanography. Discuss the contribution of oceanographers to the study of oceanography.

Q2) Write a detailed note on the theory of plate Tectonics.

Q3) Explain the detail relief of the ocean bottom with respect to continental margin and ocean ridges and rises.

Q4) Write a detailed note on density and salinity of ocean water.

Q5) What is meant by tides? Discuss the Equilibrium Theory of tides.

Q6) Define ocean current. Discuss the factors responsible for ocean currents.

Q7) Write notes (Any two) :

- a) Formation of world oceans.
- b) Tidal currents and their effects.
- c) Lithogenous sediments.



Total No. of Questions :7]

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M.A./M.Sc.

GEOGRAPHY

**Gg-433: Natural and Man Made Hazards
(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 maps stencils is allowed.*

Q1) Define Natural hazards. Discuss risk and vulnerability assessment.

Q2) Give an account of 'Storms as hazards'.

Q3) Discuss various causes and effects of geological hazards.

Q4) Write an explanatory note on 'man made hazards'.

Q5) Discuss the impact of excessive irrigation with suitable examples from India.

Q6) What are biological hazards? Discuss the effects of population growth.

Q7) Write notes (Any two) :

- a) Desertification.
- b) Disaster prevention.
- c) Land slides.



Total No. of Questions :7]

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GEOGRAPHY

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

Time : 3 Hours]

[Max. Marks :80

Instructions to the candidates:

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

Q1) Explain the physiography of Europe.

Q2) Explain the growth and distribution of settlements in Europe.

Q3) Give an account of development and scope of tourism in Europe.

Q4) Discuss salient features of agriculture in Europe.

Q5) Account for the population distribution with reference to physical factors in Europe.

Q6) Describe the impact of industrial revolution on economic development in Europe.

Q7) Write notes (Any Two) :

- a) Transportation system in Europe.
- b) Major soil types in Europe.
- c) Problems of Urbanisation in Europe.



Total No. of Questions :7]

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M.A./M.Sc.

GEOGRAPHY

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

Time : 3 Hours]

[Max. Marks :80

Instructions to the candidates:

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

Q1) Explain the drainage patterns of south - east Asia. **[20]**

Q2) Describe the geological structure of south - east Asia. **[20]**

Q3) Explain the problems associated with urbanisation in south - east Asia. **[20]**

Q4) Give an account of energy resources in south - east Asia. **[20]**

Q5) Explain the composition of population in south - east Asia. **[20]**

Q6) "Tourism plays a major role in the economy of south - east Asia". Discuss.**[20]**

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

- a) Singapore is a tourist attraction.
- b) Industrial belts in south - east Asia.
- c) Growth of fundamentalist in Malaysia and Indonesia.



Total No. of Questions :7]

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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) Describe the Geographical significance of location of North America.

Q2) Describe major soil types and its distribution in North America.

Q3) Give an account of water and Land resources of North America.

Q4) Discuss various problems and prospects of agriculture in North America.

Q5) Give an account of Growth and distribution of Settlement in North America.

Q6) Give an account of political and economical issues in North America.

Q7) Write notes on any two:

- a) Population Composition in North America.
- b) Agricultural regions in North America.
- c) Importance of tourism in North America.



Total No. of Questions :7]

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GEOGRAPHY

**Gg-444: Geography of Japan
(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) *Draw figures/maps wherever necessary.*
- 4) *Use of map stencils is allowed.*

Q1) Explain the drainage patterns of Japan.

Q2) Describe factors affecting climate of Japan.

Q3) Give an account of agricultural regions of Japan.

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

Q5) Bring out the characteristics of population of Japan.

Q6) Give a detailed account of relationships of India and Japan.

Q7) Write notes (Any Two) :

- a) Plate Tectonics and Location of Japan.
- b) Management of hazards in Japan.
- c) Distribution and importance of hydel power in Japan.



Total No. of Questions :7]

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GEOGRAPHY

**Gg-445: Geography of India
(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) *Draw figures/maps wherever necessary.*

Q1) Discuss the geographical and relative Location of India.

Q2) Give an account of west flowing rivers of India.

Q3) Explain the mechanism of Indian Monsoon.

Q4) Correlate the soils and types of forest in India.

Q5) Give and account of major hydro electric power project in India.

Q6) Bring out the salient features of Green Revolution in India.

Q7) Write notes (Any two) :

- a) Problem related to industrial development in India.
- b) Population growth in India.
- c) Development of chota Nagpur region.

