P1173

[3826] - 21

M.A. / M.Sc.

GEOGRAPHY

Gg - 201: Quantitative Techniques in Geography

(2005 Pattern)

Time : 3 Hours]　　　　　　　　　　　　　　　　　　*[Max. Marks : 80*

Instructions to the candidates:

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

   2)　***Use of statistical table and calculator is allowed.***

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

Q1) a)　Differentiate between:　　　　　　　　　　　　　　**[6]**

   i)　Mean and Median.

   ii)　Descriptive and inferential statistics.

   b)　The table given below records the values of area under wheat crop (as % of net sown area) from 15 randomly selected villages from Nashik district. Find the mean and standard deviation of the area under wheat crop.**[14]**

Village	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Area	23.21	26.43	35.21	31.65	12.76	24.32	35.21	42.10	18.65	17.98	32.87	36.54	38.10	37.21	26.10

Q2) a)　Write a note on binomial an poisson distribution.　　　　**[6]**

   b)　The mean annual income of 500 families in an urban settlement is 1.50 lakh and standard deviation is 0.15 lakh. Assuming the distribution to be normal, find the probability that a randomly selected family would have income.　　　　　　　　　　　　　　　　　　**[14]**

   i)　Below Rs. 1.25 lakh.

   ii)　Above Rs. 1.75 lakh.

   iii)　Between Rs. 1.35 lakh and 1.50 lakh.

   iv)　Less than Rs. 1.20 lakh.

Q3) a) Write a note on running means. **[6]**

b) Fit a straight line trend by the method of least square to the following data. Estimate the production for next 3 years. **[14]**

Year	2001	2002	2003	2004	2005	2006	2007	2008
Production (000, tonnes)	29.4	30.2	30.4	31.4	33.8	35.8	34.7	39.7

Q4) a) Explain the concept of bivariate correlation and regression. **[6]**

b) Obtain a linear regression equation for the following set of data. Plot the scatter and regression line and comment on it. **[14]**

X = Year

Y = Profit in '000' Rs. (From an industrial unit)

X	2000	2001	2002	2003	2004	2005	2006	2007	2008
Y	27	28	30	32	30	35	40	39	45

Q5) a) Write a note on level of significance and degree of freedom. **[6]**

b) A salesman of a firm manufacturing a type of cosmetic was favoured more by boys than by girls. According to a sample study was made and the result was tabulated below. Apply the chi-square test and find out whether the hypothesis is justified by the sample study at 0.05 level of significance. **[14]**

	Most liked	Liked	Not liked	Disliked
Boys	120	250	100	80
Girls	110	190	90	60

Q6) Using 'F' test find whether the classification of field values according to type of soil is valied. **[20]**

Soil Types	Yield in quintels / Hector							
A	22	26	24	25	28	27	20	23
B	25	18	30	32	34	26	35	40
C	18	16	19	20	17	18	22	23
D	32	34	36	33	37	38	39	31

Q7) Write notes on (any two): [20]

    a)   Standard deviation and varience.

    b)   Trends and periodicity.

    c)   Student 't' test.

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[3826] - 22

M.A / M.Sc.

GEOGRAPHY

Gg - 210: Tropical Geomorphology

(2005 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 tropical environment.

Q2) Explain the processes of soil formation in the tropics.

Q3) Describe the various theories of origin of iron in laterites and discuss the distribution of laterites in India.

Q4) Define the term mass movement and the types of mass movement.

Q5) Explain the formation of domes and boulder inselbergs in the tropics.

Q6) Distinguish between the concept of peneplains and pediplains? Describe the characteristics of each plain and double surface of planation.

Q7) Write notes on (any two):

    a)   Climatic and geomorphic factors affecting weathering.

    b)   Tropical coast.

    c)   Quaternary sea level changes in the tropics.

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[3826] - 23

M.A / M.Sc.
GEOGRAPHY
Gg - 211: Synoptic Climatology
(2005 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) Differentiate between analytical and synoptic approaches in the study of synoptic climatology.

Q2) Explain in detail the formation and structure of the tropical cyclones.

Q3) Describe the formation and decay of Hurricanes in detail.

Q4) Classify airmasses and give a comparative account of airmasses developed over North America and Asia.

Q5) Classify clouds and give a detailed account of formation of cloud.

Q6) Describe the mechanism of fog formation in local weather system.

Q7) Write notes on any two:

    a)   Rossby waves.

    b)   Orographic precipitation.

    c)   Marine activities and weather forecasting.

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P1176

[3826] - 24

M.A / M.Sc.

GEOGRAPHY

Gg - 212: Agricultural Geography

(2005 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 nature and scope of agricultural geography.

Q2) Describe various physical and economic determinants influencing agriculture.

Q3) Describe various agricultural types of subsistence farming.

Q4) Describe the role of agriculture in the economic development of India.

Q5) Discuss various problems and prospects of agriculture in arid region

Q6) Give an account of various agricultural regions of India.

Q7) Write notes on (any two):

    a)   Regional approach in the study of agricultural geography.

    b)   Crop combination technique.

    c)   Land classification in India.

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[3826] - 25

M.A / M.Sc.
GEOGRAPHY
Gg - 213: Population Geography
(2005 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 evolution of population geography and explain its scope in detail.

Q2) Critically examine the Malthus theory of population growth.

Q3) Explain the influence of physical factors on population distribution.

Q4) Describe the factors related to high mortality in the past.

Q5) Define migration. Discuss the various types of migration in detail.

Q6) Give a brief account of types of population composition.

Q7) Write notes on (any two):

  a) Use of population projections in planning.

  b) Population policies in India.

  c) Occupational groups and fertility levels.

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[3826] - 26

M.A. / M.Sc.

GEOGRAPHY

Gg - 214: Geoinformatics - I

(2005 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 various elements of GIS and explain the hardware and software requirements of GIS.

Q2) Differentiate between geometric data and attribute data. Explain how the data are stored in GIS.

Q3) Describe , with examples, the relative advantages and disadvantages of raster and vector data models.

Q4) What is spatial analysis? Give examples and explain the types of spatial analysis.

Q5) Describe the advantages of overlay as a GIS analytical technique.

Q6) Give an account of 'Topology Building' in GIS.

Q7) Write notes on (any two):

    a)   Grid operations.

    b)   Digitization.

    c)   Application of GIS.

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M.A / M.Sc.
GEOGRAPHY
Gg - 220: Fluvial Geomorphology
(2005 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 fluvial geomorphology? Discuss the nature and scope of fluvial geomorphology.

Q2) Distinguish between the types of flows and discuss about steady and unsteady flows.

Q3) Differentiate between suspended load and bed load and discuss the modes of sediment transport.

Q4) Illustrate the cross section morphology with respect to form ratio.

Q5) What are the various depositional features associated with rivers.

Q6) Explain the various types of erosional process in fluvial system.

Q7) Write notes on any two.
   a) Horton's law of drainage composition.
   b) Long profile.
   c) Potholes.

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[3826] - 28
M.A. / M.Sc.
GEOGRAPHY
Gg - 221: Monsoon Climatology
(2005 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 in brief the environmental and economic importance of monsoon climatology.

Q2) Describe the Fohn's concept of origin of monsoon.

Q3) Explain in detail the annual cycle of summer monsoon.

Q4) Give an account of monsoon depressions and mid - troposphere cyclones.

Q5) Describe in detail the inter - annual - droughts and floods during monsoon.

Q6) Bringout the importance of historical perspective in forecasting.

Q7) Write notes on (any two):

   a)   Development of monsoon climatology.

   b)   Easterly Jet.

   c)   Mechanism of differential heating of land and sea.

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P1181   **[3826] - 29**
M.A / M.Sc.
GEOGRAPHY
Gg - 222: Industrial Geography
(2005 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 the nature and scope of Industrial geography.

Q2) Describe economic and Political factors affecting location of industries.

Q3) Critically examine Isard's model.

Q4) Write an essay on distribution and changing pattern of cotton textile industries in India.

Q5) Give a brief account of industrial regions of western Europe.

Q6) Explain the regional developments of industries in India.

Q7) Write notes on (any two):

   a)   Industrial Linkages.

   b)   Characteristics of centralization.

   c)   Distribution of Automobile industry.

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P1183　　　　　　　　　**[3826] - 30 - A**
M.A / M.Sc.
GEOGRAPHY
Gg - 224: Geo-informatics
(2005 Pattern) (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) What is remote sensing? Differentiate between active and passive remote sensing and explain the application of these two main types in the study of earth surface features. Give example.

Q2) Define the term "resolution" and describe the four types of resolution for the satellite data.

Q3) Explain in detail the principle that is employed in remote sensing to generate height information and produce topographic maps.

Q4) Describe the distinguishing characteristics of some of the typical satellite borne scanner systems used during the last three decades.

Q5) Give a broad outline of all the IRS data products.

Q6) Define "Spectral bands" and explain their relation with atmospheric windows. What is the significance of spectral bands in remote sensing studies."

Q7) Write notes on any two.
　　a)　FCC.
　　b)　Spectral Signature.
　　c)　Geostationary satellites.

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[3826] - 30

M.A / M.Sc.

GEOGRAPHY

Gg - 223: Geography of Rural Settlements.

(2005 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 with suitable examples the reflection of geographical aspects in the place names of settlements with examples.

Q2) Critically examine Recardo's theory.

Q3) Write an eassy on 'Rural Service Centers'.

Q4) Describe Socio-economic transformation in rural areas.

Q5) Analyse rural house types on the basis of functional use and building material.

Q6) Explain various aspects of rural development planning.

Q7) Write notes (any two):

    a)   Seasonal migration.

    b)   Patterns of settlements.

    c)   Centrality and hierarchy.

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