New

Part-III 3-Tier

2016

GEOGRAPHY

(Honours)

PAPER—VIII (Set-1)

(PRACTICAL)

Full Marks : 100

Time : 6 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer all questions

Group—A

1. The Renual Sex Ratio (females per thousand males) of thirty blocks of West Bengal has been given :

   897, 927, 949, 941, 949, 916, 954, 937,
   961, 939, 917, 948, 939, 970, 944, 881,
   941, 938, 958, 833, 962, 955, 952, 883,
   937, 925, 959, 893, 933, 944

   (a) Construct a frequency distribution with five equal classes.

   (b) Calculate the mean, median and mode.

(c) Draw the ogives.

(d) Calculate the 3rd decile and locate it on the ogive.

$4+(2+2+2)+(2\frac{1}{2}+2\frac{1}{2})+(2\frac{1}{2}+2\frac{1}{2})$

2. The table below shows age groups and selected persons to represent the election in a block.

Age group	18-23	24-29	30-35	36-41	42-47	48-53	54-59
Persons Selected	5	12	10	18	11	9	7

(a) Calculate the standard deviation of the distribution.

(b) Find out the quartile deviation.

(c) Define Co-efficient of variation of what are the special use of the measure. 3+4+3

Group—B

3. The following table shows the female literacy rate and the infant mortality 2001 in 10 states of India.

State	*Female literacy (in percent)*	*Infant Mortality rate (per thousand)*
Punjab	63·4	54
Himachal Pradesh	67·4	64
Uttar Pradesh	42·2	85
Haryana	55·7	69
Tamil Nadu	64·4	53
Kerala	87·7	16
Orissa	50·5	98
Bihar	33·1	67
Rajasthan	43·9	83
Madhya Pradesh	50·3	97

(a) Draw a Scatter diagram.

(b) Draw a best fit line by the method of least square and interpret.

(c) Calculate the expected infant mortality rate for Rajasthan and female literacy rate for the State.

3+(4+2)+3

4. (a) Compute and draw a Lorenze curve to the concentration of ST population in selector CD Blocks of Nadia district. 8+2

(b) Find out the value of Gini's Co-efficient.

Sl No.	*C.D. Blocks*	*Total Population (2011)*	*ST Population (2011)*
1.	Chapra	272289	770
2.	Krishnagar-I	280386	14199
3.	Krishnagar-II	124159	1658
4.	Nabadwip	121807	1466
5.	Krishnaganj	133359	8172
6.	Hanskhali	260969	6922
7.	Santipur	217318	8069
8.	Ranaghat-I	207394	3165
9.	Ranaghat-II	330243	12514
10.	Chakdah	362983	18117

5. (a) Differentiate between Random Sampling and Stratified Sampling technique.

(b) What you mean by sampling frame ?

(c) Why is Location quotient used ? Comment on the applicability of NNI. 3+1+2+2

6. Answer the following questions: 10×2

(a) Define Sunsynchronous Satellite. Give example.

(b) What is FCC ?

(c) What is Radiometric Resolution ?

(d) Name two Sensors of IRS-P6.

(e) State the importance of Tone and Pattern in features identification of Aerial Photo.

(f) Write two applications of ETM^+ sensor.

(g) Specify the characteristics and type of Relational Data base.

(h) Differentiate between Raster and Vector data.

(i) What are hardware requirements for GIS ?

(j) Name two software for GIS related mapping ?

7. Extract cultural and physiographic features from the given Satellite Image and interpret their relation. 8+2

8. Lab note and Viva. 5+5

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New

Part–III 3-Tier

2016

GEOGRAPHY

(Honours)

PAPER—VIII (Set-2)

(PRACTICAL)

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Group—A

Answer all questions

1. The Following table shows the cumulative frequency distribution (more than type) of percentage decadal growth of population. (2001-2011) in states / UT of India.

Table -1

% Decadal growth rate	*No. of states / UT*
More than – 0·5	35
More than – 5·5	33
More than – 11·5	29

% Decadal growth rate	*No. of states / UT*
More than – 17·5	18
More than – 23·5	08
More than – 29·5	02
More than – 35·5	0

From the above table :

(a) Construct an ordinary frequency table.

(b) Draw a frequency polygon.

(c) Compute mean, median and skewness.

(d) Compute upper quartile and locate it on more than ogive.

(e) What is meant by central tendency? 2+3+9+4+2

2. (a) What is the importance of tabulation of collected primary data.

(b) The following table (2) shows the score of 10 innings of X and Y batsman in Asia Cup tournaments 2014.

Innings	1	2	3	4	5	6	7	8	9	10
X	15	114	0	42	13	22	38	60	01	11
Y	22	81	45	01	37	53	12	10	61	25

Using proper statistical measures find out which player is most unreliable? 8

(Group – B)

3. (a) Distinguish between Correlation and Regression.

(b) Find out the correlation Co-efficient between Rain fall & Run-off score by Pearson's Product Moment *Correlation* Co-efficient from the following table. 3+7

Months	J	F	M	A	M	JU	JL	A	S	O	N	D
Rainfall in mm	25	41	62	80	140	260	300	280	200	150	30	18
Run-off Cumce	70	90	135	160	200	345	420	360	260	330	85	60

4. (a) What does Ginni Co-efficient signify ?

(b) Identify the settlement pattern from the given distribution of settlements with the application of NNI. 2+8

5. The total population of the following cities have been given according Census 2001.

Name of the City	*Total Population (in thousand)*
Kolkata	4573
Bhatpara	442
Panihati	348
South DumDum	392
Haora	1008
Maheshtala	385
Rajpur-Sonarpur	337
Siliguri	472
Asansol	475
Durgapur	493

(i) Calculate the expected population of these ten cities of West Bengal according to Rank Size rule.

(ii) Comment on the expected and actual city size distribution.

(iii) What is the importance of location quotient in locational analysis? 5+3+2

6. Answer the following questions: 10×2

(a) Mention the most important spectral regions for remote sensing purpose.

(b) What is Black body radiation?

(c) Differentiate between Spatial and Temporal resolution of a sensor.

(d) What is the utility of DBMS in GIS?

(e) Explain how consideration of "pattern' and 'Association' help in image interpretation?

(f) What is a Geostationary Satellite? Give examples.

(g) Mention two uses of TM sensor of LANDSAT Satellite.

(h) What is the importance of Georeferencing?

(i) What is the significance of DN value in detecting feature?

(j) What is supervised Classification of Satellite image?

7. Extract cultural and physiographic features from the given satellite image and interpret their relation. 8+2

8. Laboratory Note Book and Viva-voce. 5+5

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(Honours)

PAPER—VIII (Set–3)

(PRACTICAL)

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Group—A

Answer all questions.

1. The Score of selected students on Geography paper I are as following :

55, 62, 64, 51, 46, 42, 59, 68, 65
52, 57, 44, 47, 53, 58, 67, 60, 52
63, 61.

(a) Classify the data in four equal classes and construct a frequency table.

(b) Draw a Histogram and Frequency polygon.

(c) Calculate the Mode and Graphically represent it on the Histogram.

(d) Calculate the quantile deviation. 3+(3+2)+(2+2)+3

2. Age structure of the employees of an agriculture farm is given below :

Age (in year)	10-15	20-25	25-30	30-35
Number of worker	40	60	90	170
Age (in year)	35-40	40-45	45-50	50-55
Number of workers	140	110	60	49

(i) Draw ogives.

(ii) Estimate the number of employees between the ages 25-27.

(iii) Calculate the median and 6th decile by graphical method. 4+4+2

3. (a) Differentiate between Attribute and variable.

(b) Why do we Calculate Skewness of data ?

(c) What does Co-efficient of Variation signify ?

$2+1\frac{1}{2}+1\frac{1}{2}$

Group—B

4. Following is the record gauge data for ten selected stations of a river basin.

Sl. No.	Rainfall (in mm)	Discharge (in cusecs)
1.	56	62
2.	59	60
3.	68	57
4.	40	26
5.	55	63
6.	72	82
7.	64	71
8.	60	66
9.	65	68
10.	50	62

(a) Draw a scatter diagram. Draw best fit line using least square method and interpret it. 3+4+1

(b) Find out product moment correlation co-efficient between rainfall and discharge of the given river basins. 5

(c) Differentiate between correlation and regression. 2

5. Following is the records on area under (hectare) different crops in selected blocks.

Block Name	Rice	Potato	Oilseeds
Arambagh	28290	5090	1587
Singur	16350	5290	2220
Tarakeswar	11594	7960	1124
Pursura	7923	7290	2050

(a) Calculate Crop-Combination Index from the above data and interpret. 8+2

(b) Define age specific birth and death rate ?

(c) What is purposive Radom Sampling ?

(d) What is the Significance of Ginni Co-efficient.

2+2+1

Group—C

6. Answer the following questions : 10×2

(a) What is Black Body Radiation ?

(b) What is spectral Resolution ?

(c) What do you mean by data model in GIS ?

(d) What do you understand by absorption band ?

(e) What are the basic components of GIS ?

(f) What is multispectral image ?

(g) What do you mean by IFOV ?

(h) What are the characteristics of geostationary satellites ?

(i) Mention the band combination of standard FCC.

(j) What is the utility of DBMS in GS ?

7. Prepare a land use/land cover map from the given standard FCC and interpret it. 8+2

8. Laboratory Note Book and Viva-Voce. 5+5

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