

2025

GEOGRAPHY — HONOURS

Paper : SEC-1

(Methods in Geography)

Full Marks : 100

The figures in the margin indicate full marks.

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

Use of Any Scientific Calculator is Allowed in this Examination / Paper.

Category - A

Answer **any ten** questions (each within **50** words).

1. Distinguish between open and close ended questions. 2
2. (a) Which of the following is discrete data and which is continuous data?
 - (i) Forested area in hectares
 - (ii) Number of trees.(b) Which of the following is a primary source of data and which is a secondary source of data?
 - (i) Census data
 - (ii) Researcher's / Participant's Diary. 1+1
3. What do you mean by stratified sampling? 2
4. What is meant by 'coding' of data in the context of computer assisted field data entry? What is Likert scale? 1+1
5. The following data series represents amount of rainfall (cms) for 10 years :
110, 97, 95, 105, 90, 107, 100, 102, 98, 93.
Determine the measure of Central Tendency which is also a partition value. 2
6. If mean literacy rate of 20 districts is 65% and standard deviation is 10%, determine the coefficient of variation. 2
7. Which measure of central tendency can be represented on an Ogive? Determine the value of mean rainfall from the given data of rainfall (mm) for twelve months in Kolkata :
15.4, 24.6, 36.8, 55.0, 118.5, 276.7, 371.6, 372.1, 325.0, 179.6, 32.6, 5.6 1+1

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8. Mention two advantages of using distometer. 2
9. What is meant by smartphone levelling? 2
10. State two uses of Brunton's compass. 2
11. What is detour index? 2
12. What is map scale? 2
13. Given two satellite images of Sundarban coastal area, which characteristic will help to identify whether there is a shift along the coast of Sundarbans? 2
14. Calculate the total number of weekly long-distance trains from Howrah to (a) Bhubaneswar,
(b) Vishakhapattanam based on the data provided in Table 1 : 1+1

Table 1 : Weekly Flow of Trains

From	To	Via	Number of Trains
Howrah	Bhubaneswar		13
Howrah	Hyderabad	Bhubaneswar, Vishakhapattanam	9
Howrah	Chennai	Bhubaneswar, Vishakhapattanam	7
Howrah	Chennai	Vishakhapattanam	5

Category - B

Answer *any seven* questions (each within 125 words).

15. Discuss the utility of conducting of pilot survey. 5
16. Name the measure of central tendency which can be represented on a Histogram. Determine the value of this measure for the following data : 1+4

Table 2 : Variation in Urbanisation across some districts

Classes (Percentage Urbanisation)	0 – 15	15 – 30	30 – 45	45 – 60	60 – 75
Frequency (Number of Districts)	7	13	11	3	1

17. Differentiate between random and stratified sampling. 5
18. Discuss the advantages of scheduled questionnaire. 5

19. The following table provides data regarding distribution of number of days in a month across different ranges of relative humidity. (a) Prepare a frequency distribution table of equal class from the given data in Table 3 and (b) Determine the percentage of days in the month that relative humidity was between 40% and 80%. 2+3

Table 3 : Distribution of number of days in a month across different ranges of relative humidity

Class (Percentage of relative humidity)	Frequency (f) (Number of rainy days)
More than 0	30
More than 20	28
More than 40	23
More than 60	15
More than 80	5

20. Explain the importance of satellite imagery in assessing flooded areas. 5
21. Explain the importance of field survey in geographical studies. 5
22. Briefly discuss the concepts of triangles used in Ternary Diagram as proposed by Ashok Mitra. Use suitable diagrams to illustrate your answer. 4+1
23. Write a short note on accessibility maps and their application in transport geography. 5
24. Calculate the detour index values from data provided in Table 4. Mention which centre has the maximum accessibility. 4+1

Table 4 : Route Distance and Straight Line Distance from Town P to Some Other Towns / Centre.

Origin Node	Destination Centre	Route Distance (kms)	Straight Line Distance (kms)
P	A	9.0	8.5
	B	10.0	7.5
	C	13.5	11.5
	D	8.5	8.0
	E	6.0	5.5
	F	4.5	4.0
	G	15.0	13.0
	H	8.0	7.0

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Category - CAnswer *any three* questions (each within 500 words).

25. Differentiate between probability and non-probability sampling. Which type of probability sampling is most suited for population whose characteristics are not known? Discuss the advantages and disadvantages of this method of sampling identified above. 8+1+6
26. Determine the standard deviation of Pupil-Teacher ratio for Government and Private Schools to compare the variability of pupil-teacher ratio at primary level in Government and Private Schools for the given states of India (data given in Table 5). Mention whether Government or Private Schools (at primary level) have greater variation in pupil-teacher ratio. 7+7+1

Table 5 : Pupil-Teacher Ratio at Primary Level, 2019-2020

States	Government Schools	Private Schools
Andhra Pradesh	20	31
Bihar	60	42
Chhatisgarh	21	17
Himachal Pradesh	13	20
Karnataka	16	28
Meghalaya	20	19
Punjab	21	29
Rajasthan	23	28
Uttar Pradesh	29	32
West Bengal	30	27

27. Explain the importance of grain size analysis in understanding depositional environments. Describe the methodology of seive analysis in detail. 5+10
28. Prepare a questionnaire with double and multiple choice questions about the perception of the people regarding the incidence of dengue and the preventive measures adopted in the locality. 15

29. In determination of dominant and distinctive economic function, what is the nature of function of the town which has no distinctive function? Mention the main advantage of analysing the dominant and distinctive function of towns. Determine the distinctive function of the five towns from the data provided in Table 6. 1+2+12

Table 6 : Percentage of non-agricultural workers in some towns / cities. 2001.

Towns / Cities	Percentage of Non-agricultural Workers, 2001			
	Manufacturing & Related	Trade & Commerce & Related	Transport & Communication	Other Services
Belgaum	36.1	25.1	9.5	29.3
Gulbarga	26.4	25.1	12.1	36.3
Bidar	17.9	26.5	10.6	45.0
Hospet	32.3	26.9	14.5	26.4
Mandya	30.6	26.3	10.2	32.9
Mean	28.7	26.0	11.4	34.0
Standard Deviation	6.2	0.7	1.8	6.5