

2023

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 scientific calculators is allowed in this Examination / Paper.

Group - A

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

1. Define primary survey. 2
2. What is sampling bias? 2
3. Differentiate between variable and attribute. 2
4. Differentiate between raw data and grouped data. 2
5. Mention the name of any two software used for entry and analysis of field data. 2
6. If mean temperature is 20 °C and coefficient of variation is 40%, calculate the standard deviation. 2
7. Determine the median of these rainfall (cm) observations at 12 stations : 95, 55, 61, 81, 107, 101, 73, 77, 98, 77, 89, 83. 2
8. Differentiate between range and interquartile range. 2
9. Mention one advantage and one disadvantage of undertaking smartphone levelling. 1+1
10. The yields in grams of five tomato plants are 1205, 1247, 1302, 1256 and 1260. What is the mean yield? 2
11. State the uses of distometer. 2
12. Mention any two advantages of using satellite images for mapping areal extent of riverbank shift. 2
13. What do you mean by dominant and distinctive function? 2
14. What is detour index? 2

Please Turn Over

Group - B

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

15. Define pilot survey and discuss its relevance for conducting a primary survey. 5
16. Write a short note on simple random sampling. 5
17. Mention any five differences between questionnaire and survey schedule. 5
18. What are the different parts of a master table? Explain with the help of suitable diagram. State two advantages of tabulation of data. 2+1+2
19. Calculate the detour index values from the data provided in Table-1. 5

Table - 1

| From | To | Shortest route distance (km) | Straight line distance (km) |
|------|----|------------------------------|-----------------------------|
| P | A | 1.0 | 0.9 |
| | B | 5.0 | 5.0 |
| | C | 5.0 | 4.9 |
| | D | 9.0 | 7.5 |
| | E | 9.0 | 5.8 |
| | F | 9.5 | 5.9 |
| | G | 5.5 | 3.9 |
| | H | 4.5 | 3.6 |
| | I | 8.5 | 5.8 |
| | J | 9.5 | 6.6 |

20. Calculate the frequency densities from the data given in Table-2. 5

Table - 2

| Daily income (Rs.) | No. of employees |
|--------------------|------------------|
| 124.5 – 134.5 | 105 |
| 134.5 – 154.5 | 338 |
| 154.5 – 174.5 | 271 |
| 174.5 – 194.5 | 260 |
| 194.5 – 244.5 | 266 |
| Total | 1240 |

21. What is the difference between absolute dispersion and relative dispersion? What is the advantage of using relative dispersion? 3+2
22. What is the utility of a ternary diagram? What data units are used along the three axes? 3+2
23. Discuss the different parts of a brunton compass. 5
24. Discuss the importance of undertaking soil particle size analysis. 5

Group - C

Answer *any three* questions (each within **500** words).

25. State the sampling type suitable for analysis of disparity in an area where the people of different social groups reside and discuss its advantages and disadvantages. 15
26. Prepare a questionnaire with double and multiple answer types questions about the perception of the local people regarding the environmental problems in their locality. 15
27. Explain the stages involved in the textural classification of soil samples using sieve set mentioning the primary soil textural classes. 15
28. Compare the variability of rainfall for the two given districts (Table-3) using co-efficient of variation. 15

Table - 3

Monthly rainfall for two stations (mm), 2021

| Months | Jaisalmer | Darjeeling |
|-----------|-----------|------------|
| January | 0.0 | 12.2 |
| February | 0.0 | 2.6 |
| March | 0.0 | 17.2 |
| April | 0.6 | 69.4 |
| May | 37.2 | 309.7 |
| June | 57.4 | 584.3 |
| July | 96.8 | 722.1 |
| August | 5.6 | 876.8 |
| September | 113.7 | 356.6 |
| October | 2.4 | 385.9 |
| November | 0.0 | 21.2 |
| December | 3.0 | 15.8 |

29. How the areas inundated during a given flood event can be mapped using satellite images and elevation models? 15