PG/IS/RSG-102/19

M.Sc. 1st Semester Examination, 2019

REMOTE SENSING AND GIS

PAPER —RSG-102.1 & 102.2

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

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

Illustrate the answers wherever necessary

Write the answers to Questions of each Papers in separate books

RSG – 102.1

(*Fundamentals of Geographic Information System*)

[Marks : 20]

GROUP – A

Answer any **two** questions : 2 × 2

1. Define GIS with mentioning its major functionality.

2. What is Topology in GIS ?

3. What do mean by open source softwares ? Give examples of open source image processing softwares.

4. What is geo-database ?

GROUP – B

Answer any **two** questions : 4 × 2

5. Why we georeference a map prior to digitization ?

6. What kind of errors do occure during preparing a geo-database in GIS ? Explain with suitable illustration.

7. Differentiate between raster and vector data structure.

8. What do you mean by edge matching and rubber sheeting ?

GROUP – C

Answer any **one** question : 8 × 1

9. Briefly explain the methods of digitization in GIS. Mention their advantages and disadvantages. 8

10. (*a*) What are the advantages of vector data model ?

(*b*) Distinguish between analog data and digital data.

(*c*) What do you mean by Re-projection in GIS ?
2 + 3 + 3

RSG – 102.2

(*Digital Cartography*)

[Marks : 20]

GROUP – A

Answer any **two** questions : 2 × 2

11. What do you mean by digital cartography ?

12. How many GCPs are being used for rectifying

an image through second order polynomial transformation ?

13. Compare between choroplethic and isoplethic mapping.

14. What would be the scale of a map(RF-1 : 20,000) after 1/4th reduction ?

GROUP – B

Answer any **two** questions : 4 × 2

15. Compare between ratio and interval data.

16. Write a short note on multivariate mapping.

17. Briefly discuss the advantages of digital cartography.

18. Write short notes on nominal and ordinal data and give examples.

GROUP – C

Answer any **one** question : 8 × 1

19. How visual variables are used for image interpretation and digital mapping ?

20. Give one example each for continuous and discrete data and identify their basic methods of collection and representation techniques using digital cartography.
