( 4 )

**GROUP—C**

Answer *any* **one** question :                    8×1=8

**9.** Discuss different types of Map Algebra operations to perform raster data analysis with neat sketches.

**10.** Explain different types of surface model with suitable sketches.

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# 2024

## M.Sc. 2nd Semester Examination

### REMOTE SENSING & GIS

### PAPER : RSG-203

### ( Advanced Geographic Information System )

*Full Marks* : 40

*Time* : 2 hours

Answer **all** questions.

*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.*

### SECTION–A

### PAPER : RSG-203.1

### ( GIS Data Analysis )

### GROUP—A

Answer any **two** questions :                    2×2=4

**1.** Why is data compression important for storing raster geospatial data?

**2.** What is 'Metadata'?

**3.** What are the key components of 'spatial data' quality include?

**4.** Define 'lineage' in GIS data.

### GROUP—B

Answer any **two** questions :                4×2=8

**5.** Write a short note on chain coding in GIS data organization.

**6.** Define Buffer in GIS and elucidate different types of Buffer with neat sketches.

**7.** What are the functions of DBMS (Database Management System)?

**8.** Differentiate between topological and spaghetti model.

### GROUP—C

Answer any **one** question :                8×1=8

**9.** Discuss very briefly about the concepts of Hierarchical model, Network model and Relational model in GIS.                8

**10.** Briefly discuss about 'uncertainty' and explain its relationship with the concept of 'errors' in GIS data.                4+4

### SECTION–B

### PAPER : RSG-203.2

### ( Modelling Spatial Database and Analysis )

### GROUP—A

Answer any **two** questions :                2×2=4

**1.** What do you mean by database?

**2.** What are the importances of overlay analysis?

**3.** What is spatial query?

**4.** What is spatial interpolation?

### GROUP—B

Answer any **two** questions :                4×2=8

**5.** Write a short note on Geo-database with examples.

**6.** Briefly describe different types of attributes in DBMS.

**7.** Write a note on Network Model in GIS.

**8.** Describe shortly about benefits of spatial database.