

A-0645

Total Pages : 4

Roll No.

GIS-503/DGIS-503/CGIS-503

Fundamentals of GIS

(MAGIS/MSCGIS/DGIS/CGIS)

Examination 2026 (Feb.)

Time: 02:00 hrs

Max. Marks: 70

Note : This paper is of seventy (70) marks divided in to two (02) Section A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-“A”

(Long Answer - type Questions)

Note:- Section ‘A’ contains Five (05) long-answer-type questions of nineteen (19) marks each. Learners are required to answer any two (02) questions only.

(2x19=38)

P.T.O

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1. Describe the different types of spatial data models used in GIS. Compare raster and vector models with examples.
2. Define the following terms:
 - a. WGS84
 - b. Python
 - c. Legends
 - d. Scale bar
 - e. Free and Open Source Software (FOSS)
 - f. ArcGIS
 - g. Relational Database Management System (RDMS)
3. Highlight the importance of remote sensing in GIS and describe the techniques used to incorporate satellite images.
4. Describe the essential map elements and key design principles used in GIS-based data visualization.
5. Define the following terms:
 - a. Feature class
 - b. Keyhole Markup Language (KML)
 - c. QGIS
 - d. Antivirus software
 - e. Google Earth
 - f. Map Elements
 - g. Spatial Query

Section-“B”

(Short -answer - type questions)

Note:- Section ‘B’ contains eight (08) short-answer type questions of eight (8) marks each. Learners are required to answer any Four (04) questions only.

(4x8=32)

1. What is the difference between spatial and non-spatial data?
2. Describe the role of neighborhood operations in GIS and highlight their key applications.
3. Write a short note on system software, focusing on its definition and core functionalities.
4. What is a shapefile? Mention its components.
5. Explain the features, functionalities, and applications of the Bhuvan Geoportal developed by ISRO.
6. What are the various topological Errors in GIS? Explain each of them diagrammatically.
7. Differentiate between a website, portal, and geoportal, highlighting their core functions and features.

P.T.O

8. Explain the following terms:
 - a. Geocoding
 - b. Buffering
 - c. Graticule
 - d. Proprietary Software
 - e. Website
