

Reg. No

Name

25P2044

M. Sc. DEGREE END SEMESTER EXAMINATION - APRIL 2025

SEMESTER 2 : ENVIRONMENTAL SCIENCE

COURSE : 24P2EVST07 : REMOTE SENSING AND GIS

(For Regular 2024 Admission)

Duration : Three Hours

Max. Weights: 30

PART A

Answer any 8 questions

Weight: 1

1. How does the raster data model represents surfaces? (U, CO 6)
2. What are the objectives of digital image processing? (U, CO 2, CO 3, CO 4, CO 5)
3. What is clinometer? (U, CO 1, CO 3)
4. What are Landsat series of satellites? (R, CO 2, CO 3, CO 4, CO 5)
5. How does the raster data model represent spatial relationships? (U, CO 6)
6. Write briefly data 'information' as one component of GIS. (R, CO 3)
7. What is meant by coordinate system? (R, CO 3)
8. What is cartography? (R, CO 1, CO 3)
9. What are the diverse applications of GIS. (R, CO 1)
10. Write a short note on spectral characteristics of vegetation (R, CO 1, CO 2, CO 3, CO 6)
(1 x 8 = 8)

PART B

Answer any 6 questions

Weights: 2

11. Briefly describe NOAA. (R, CO 2, CO 3, CO 4, CO 5)
12. What are the applications of remote sensing and GIS in agriculture? (A, CO 2, CO 3, CO 4, CO 5)
13. Explain the Scanners used in sensors (A, CO 1, CO 2, CO 3, CO 6)
14. Write short notes on the history and development of GIS. (U, CO 3)
15. Write a note on GPS space segment (R, CO 1)
16. What is topographical map? Explain the interpretation of topographical maps. (U, CO 1, CO 3)
17. Briefly explain Aerial photogrammetry and terrestrial photogrammetry (U, CO 1, CO 3)
18. How can GIS be used for land use planning? (U, CO 6)
(2 x 6 = 12)

PART C
Answer any 2 questions

Weights: 5

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| 19. | Write an essay on the different data models used in GIS. | (U) |
| 20. | Write an essay on data types in GIS. | (R) |
| 21. | Explain supervised and unsupervised classification. | (U, CO 2, CO 3, CO 4, CO 5) |
| 22. | What is digital image classification? Explain the two approaches in classification. | (U, CO 2, CO 3, CO 4, CO 5)
(5 x 2 = 10) |

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Define basic level fundamental physical principle of remote sensing and GIS	R	3, 8, 9, 10, 13, 15, 16, 17	12
CO 2	Explain Remote Sensing Systems and programmes (sensors, platforms, etc.) and demonstrate its potential to spatial analysis.	U	2, 4, 10, 11, 12, 13, 21, 22	19
CO 3	Make use of basic computational properties of remote sensing data acquisition, storage, and processing.	U	2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 21, 22	29
CO 4	Make use of basic computational properties of remote sensing data acquisition, storage, and processing.	An	2, 4, 11, 12, 21, 22	16
CO 5	Compare different types of remote sensing data products and analysis techniques and select the most appropriate to solve a real-world problem.	E	2, 4, 11, 12, 21, 22	16
CO 6	Develop critical thinking skills in solving geospatial problems	U	1, 5, 10, 13, 18	7

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;