Reg. No ....   Name **23P2040**

M. Sc. DEGREE END SEMESTER EXAMINATION : MARCH 2023
SEMESTER 2 : ENVIRONMENTAL SCIENCE
COURSE : **21P2EVST07 : REMOTE SENSING AND GIS**
(For Regular - 2022 Admission and Supplementary - 2021 Admission)

Duration : Three Hours   Max. Weights: 30

PART A
Answer any 8 questions   **Weight: 1**

1.	What is topographical map?	(U, CO 3)
2.	What does isobars on a weather map indicate?	(R, CO 1, CO 2)
3.	What are the disadvantages of photogrammetry?	(U, CO 1, CO 3)
4.	Expand RADAR and LIDAR. Write a short note on each.	()
5.	What is the difference between spectral reflactance and spectral signature.	(R, CO 1)
6.	What is Multispectral scanning	(A, CO 6)
7.	Give a note on INSAT	(R, CO 1)
8.	What are Landsat series of satellites?	()
9.	What is Sun synchronous satellite.	(U, CO 2, CO 3)
10.	Give a short note on GIS	(R, CO 3)

(1 x 8 = 8)

PART B
Answer any 6 questions   **Weights: 2**

11.	Explain Multispectral Scanning	(A, CO 6)
12.	Define Sensor. Explain the types with example.	(U, CO 2, CO 3)
13.	Write note on microwave sensors	(U, CO 2, CO 3)
14.	Briefly describe IRS satellites.	(R, CO 3, CO 4)
15.	Explain supervised and unsupervised classification.	(U, CO 5)
16.	Write a note on raster data model.	(U, CO 6)
17.	Write a note on topology creation.	(U, CO 6)
18.	Comment on GPS control segment.	(R)

(2 x 6 = 12)

PART C
Answer any 2 questions   **Weights: 5**

19.	Explain EMR as a major source of energy in remote sensing and its interaction with the atmosphere.	(R, CO 1)
20.	Describe image interpretation.	(U, CO 5)

21. Explain image restoration and rectification. (U, CO 5)

22. Describe the applications of GIS and remote sensing in the following area? (U, CO 6)
    a) Agriculture   b) Climate   c) Forestry

(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	2, 3, 5, 7, 19	9
CO 2	Explain Remote Sensing Systems and programmes (sensors, platforms, etc.) and demonstrate its potential to spatial analysis.	U	2, 9, 12, 13	6
CO 3	Make use of basic computational properties of remote sensing data acquisition, storage, and processing	R	1, 3, 9, 10, 12, 13, 14	10
CO 4	Analyse geographical information and address problems and/or research questions.	R	14	2
CO 5	Compare different types of remote sensing data products and analysis techniques and select the more appropriate to solve a real-world problem	U	15, 20, 21	12
CO 6	Develop critical thinking skills in solving geospatial problems	U	6, 11, 16, 17, 22	12

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