

CBCS SCHEME



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17TE72

Seventh Semester B.E. Degree Examination, July/August 2022 Satellite Communication and Remote Sensing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Briefly describe the historical development of Remote Sensing Systems. (10 Marks)
- b. Write the comparison of Traditional and New users of Remote Sensing Image data. (10 Marks)

OR

- 2 a. What is Outer Space Treaty? What are the additional Principles Governing the use of Remote Sensing in the treaty? (10 Marks)
- b. List the advantages of Environment monitoring from Satellite Sensors. Discuss each of them. (10 Marks)

Module-2

- 3 a. Explain the major Spectral bands within the Electromagnetic Spectrum with diagram. (10 Marks)
- b. Define the following terms and units of measurement applied to Remote Sensing :
i) Radiant flux ii) Radiance iii) Emissivity iv) Absorptance
v) Transmittance. (10 Marks)

OR

- 4 a. What is Spectral Signature? Enumerate the main factors affecting the Spectral Signature. (08 Marks)
- b. Discuss the Thermal properties of Vegetation. (08 Marks)
- c. Illustrate the characteristics of Atmospheric Scattering. (04 Marks)

Module-3

- 5 a. Describe the Spatial Resolution of a Sensor System. (06 Marks)
- b. Briefly discuss the scheme of functioning of an along track Scanner. (06 Marks)
- c. Define Microwave Radiometers. Explain the operation and applications in Remote Sensing. (08 Marks)

OR

- 6 a. With neat diagram and equation, discuss the range of Resolution and Azimuth Resolution of a Radar system. (10 Marks)
- b. Elaborate the working of Cross – Track Scanners with scheme of functioning. (06 Marks)
- c. Write a short note on Photographic Cameras. (04 Marks)

Module-4

- 7 a. Illustrate the effective incorporation of Remote Sensing into a Project. (10 Marks)
- b. What are the types of interpretation approaches to extract information from Remote Sensing Data? (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Explain the generalized procedure for the interpretation of Remote Sensing Imagery. (10 Marks)
b. Describe the constraints in using Remote Sensing Data. (10 Marks)

Module-5

- 9 a. Discuss the Hierarchical Organization of Visual Interpretation Criteria. (10 Marks)
b. Illustrate the Elements of Visual Analysis. (10 Marks)

OR

- 10 a. With neat diagram, explain the processes in Color formation. (08 Marks)
b. Write a short note on Texture. (06 Marks)
c. Explain the different perspectives of the Multitemporal Analysis. (06 Marks)

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