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Question Paper Code: U9172

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

Open Elective

Civil Engineering

21UCE972-REMOTE SENSING and GIS APPLICATION

(Common To All Branches)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5 x 1 = 5 Marks)

- In 1860s, _____ conceptualized the EM Radiation as an EM energy or wave which travels through space at the speed of light. CO1-U
(a) James Maxwell (b) James Watt
(c) Sir Issac Newton (d) None of the above
- Rayleigh scattering occurs when particle size is _____ than wavelength of incoming radiation. CO2-U
(a) Very small (b) Equal
(c) Smaller than or equal (d) None of the above
- _____ is one of most common land based plate form. CO3-U
(a) Hand held (b) Wireless antenna
(c) Cherry Picker (d) All of above
- What is the basic output of GIS or spatial data analysis system? CO4-U
(a) Software (b) Numbers (c) Locations (d) Map
- What is an entity or a point/line which is represented by two values in GIS? CO5-U
(a) XY GIS (b) XZ GIS (c) YZ GIS (d) 2-D GIS

PART – B (5 x 3= 15 Marks)

6. What is the various types of remote sensing? CO1-U
7. What is geostationary satellite? CO2-U
8. What is PCA? CO3-U
9. What are the basic segments of GPS? CO4-U
10. Mention the advantages of GIS. CO5-U

PART – C (5 x 16= 80 Marks)

11. (a) Justify the importance of various types of platform in remote sensing in various projects. CO1-U (16)
Or
(b) Explain the various principles of spectral signature concepts. CO1-U (16)
12. (a) Explain the necessity of the microwave sensors. CO2-U (16)
Or
(b) Explain the important Earth Resources and Meteorological satellites. CO2-U (16)
13. (a) What are various unsupervised classification methods in satellite imagery? CO3-U (16)
Or
(b) Explain the Spectral library, Spectral Resampling, Library Builder. CO3-U (16)
14. (a) Explain the various types of data in GIS. CO4-U (16)
Or
(b) What are the various projections in GIS. CO4-U (16)
15. (a) Explain the various attribute data analysis. CO5-U (16)
Or
(b) Explain about the advantages of QGIS. CO5-U (16)