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**4 SEM TDC GGRH (CBCS) C 10**

**2024**

( May/June )

**GEOGRAPHY**

( Core )

Paper : C-10

**( Remote Sensing and GIS )**

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. Answer the following as directed :  $1 \times 5 = 5$

(a) Sun is the ultimate source of energy in remote sensing.

( Write True or False )

(b) Remote sensing data with hundreds of spectral bands is known as ultra-spectral/hyper-spectral/multi-spectral.

( Choose the correct answer )

(c) Give two examples of ground-based remote sensing platforms.

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(d) The satellite with maximum frequency of revisit over the same location has greater spatial/temporal/spectral resolution.

( Choose the correct answer )

(e) Meteosat/EDUSAT is an example of polar orbiting/geo-stationary satellite.

( Choose the correct answer )

2. Answer any *three* of the following questions  
(within 120 words each) :  $4 \times 3 = 12$

(a) Explain the merits and demerits of remote sensing.

(b) Explain the role of spatial resolution in remote sensing with examples.

(c) Cite out the major differences between polar orbiting and geo-stationary satellite.

(d) Discuss in brief about the elements of remote sensing with suitable diagram.

3. Answer any *three* of the following questions :  
 $12 \times 3 = 36$

(a) Describe briefly the concept of spectral, temporal and radiometric resolution in remote sensing. Give relevant examples.

( 3 )

(b) What do you mean by the concepts of EMR and EMS in remote sensing? Discuss in brief about atmospheric window and its significance in remote sensing.

(c) Define sensors and platforms in remote sensing. Give an outline of different types of sensors used in remote sensing with appropriate example.

(d) Define spectral signature in remote sensing. Discuss how spectral property of different objects in the surface of the earth becomes helpful for detection and analysis in remote sensing.

(e) Discuss briefly about the optical, thermal and micro-wave remote sensing with relevant examples.

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