Total No. of Questions: 6 *Total No. of Printed Pages:2*

Enrolment No.....

Faculty of Engineering
End Sem Examination May-2024
OE00038 Remote Sensing & GIS

Programme: B.Tech. Branch/Specialisation: All

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. Global positioning system is based on a principle called- **1**
(a) Arbitration (b) Trilateration
(c) Orbetration (d) Globalization

ii. What are the clocks called used in GPS satellites? **1**
(a) Caesium clocks (b) Millisecond clocks
(c) Microsecond clocks (d) Atomic clocks

iii. The technical term "Remote Sensing" was first used in the United States in- **1**
(a) 1955 (b) 1960 (c) 1965 (d) 1970

iv. Active remote sensing is- **1**
(a) Similar to photography in night with flash
(b) Similar to photography in daytime without flash
(c) Both (a) and (b)
(d) None of these

v. The object of photo-interpretation is- **1**
(a) Identification
(b) Recognition of objects
(c) Judging the significance of objects
(d) All of these

vi. Which one of the following helps to identify the objects on the earth surface? **1**
(a) Atmospheric window (b) Signature
(c) Radiometric error (d) None of these

vii. GIS deals with which kind of data **1**
(a) Numeric data (b) Binary data
(c) Spatial data (d) Complex data

viii. GIS stands for- **1**
(a) Geological Information System
(b) General Information System
(c) Geographical Information System
(d) None of these

ix. By spatial data we mean that has- **1**
(a) Complex values (b) Positional values
(c) Graphic values (d) Decimal values

x. What is 'Metadata'? **1**
(a) It is 'data about data' (b) It is 'meteorological data'
(c) It is 'oceanic data' (d) It is 'contour data'

Q.2 i. Define GPS. Write any two uses of GPS. **2**
ii. Write about working principle of GPS. **3**
iii. What are the various GPS system segments? **5**
OR iv. Write short notes on- **5**
(a) ECEF Co-ordinates (b) WGS84

Q.3 i. Write types of sensors with examples. **2**
ii. Explain the components of remote sensing. **8**
OR iii. Explain various types of satellites with examples. **8**

Q.4 i. Write in brief about photo image interpretation keys. **3**
ii. What are the various digital image analysis techniques? **7**
OR iii. Explain application remote sensing in terrain investigation. **7**

Q.5 i. Define GIS and write any three applications of GIS. **4**
ii. What are the various components of a GIS? Write in detail. **6**
OR iii. Write notes on types of map projections. **6**

Q.6 Attempt any two:
i. Define raster and vector data. **5**
ii. Explain elements of raster data modelling. **5**
iii. Write notes on- **5**
(a) Data models for composite features
(b) Comparison of vector and raster data

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Marking Scheme

OE00038 (T) Remote Sensing & GIS

Q.1	i)	B)	**1**
	ii)	D)	**1**
	iii)	D)	**1**
	iv)	B)	**1**
	v)	D)	**1**
	vi)	B)	**1**
	vii)	C)	**1**
	viii)	C)	**1**
	ix)	B)	**1**
	x)	A)	**1**
Q.2	i.	1 mark for definition and 0.5 mark for each use	**2**
	ii.	0.5 marks for each point	**3**
	iii.	2 marks for naming of segments, and 3 marks for explanation	**5**
OR	iv.	2.5 marks for each part	**5**
Q.3	i.	1 mark for name and 1 mark for example	**2**
	ii.	1 mark for each point	**8**
OR	iii.	6 marks for types with explanation and 2 marks for examples	**8**
Q.4	i.	1 mark for definition and 2 marks for explanation	**3**
	ii.	1 mark for each point	**7**
OR	iii.	1 mark for each application	**7**
Q.5	i.	1 mark for definition and 3 marks for application	**4**
	ii.	2 marks for name of component and 4 marks for explanation	**6**
OR	iii.	4 marks for explanation and 2 marks for diagrams	**6**
Q.6			
	i.	2.5 marks for each part	**5**
	ii.	0.5 marks for each point	**5**
	iii.	2.5 marks for each part	**5**

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