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Total No. of Questions : 16 ]

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# PGD-435

## P.G. Diploma in Geoinformatics and Remote Sensing Examination, 2022

### FUNDAMENTAL CONCEPT OF EARTH SYSTEM

Paper - PGD - 101

*Time : 3 Hours ]*

*[ Maximum Marks : 100*

#### Section-A

**(Marks : 2 × 10 = 20)**

*Note :-* Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

#### Section-B

**(Marks : 7 × 5 = 35)**

*Note :-* Answer *five* questions, selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries **7** marks.

#### Section-C

**(Marks : 15 × 3 = 45)**

*Note :-* Answer *three* questions, selecting *one* question from each Unit (Answer limit **500** words). Each question carries **15** marks.

#### Section-A

1. Attempt all *ten* questions. Answer should not exceed **50** words in each question.
  - (i) Define Photo-theodolite.
  - (ii) What is Geodesy ?
  - (iii) What is Geodetic Datum ?

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- (iv) What is Cartography ?
- (v) What is GPS ?
- (vi) Write the *three* components of GPS.
- (vii) What is Trilateration ?
- (viii) Name the parameters that are calculated after Trilateration.
- (ix) Write the types of maps based on relief representation.
- (x) What are the branches and sub-branches of Cartography ?

### **Section-B**

**Note** :- Answer *five* questions, selecting at least *one* question from each Unit. Answer of each question should not exceed **200** words.

#### **Unit-I**

- 2. What is Coordinate System ? Describe its types.
- 3. Differentiate Geographic Coordinate System (GCS) and Projected Coordinate System (PCS).
- 4. Write a short note on types of thematic maps.

#### **Unit-II**

- 5. How does GPS work ?
- 6. Write about sources of GPS errors.
- 7. Write a short note on nature of Geographical Samples.

#### **Unit-III**

- 8. What is Digital Cartography ? Give its application.
- 9. Write a short note on Symbolization.
- 10. How does Digital Image Processing (DIP) work ? Explain.

### **Section–C**

**Note** :- Attempt any *three* questions, selecting *one* question from each Unit. Answer of each question should not exceed **500** words.

#### **Unit–I**

11. What is Map Projection ? Write elements of Map Projection. Explain the classification of map projection.
12. What are the elements of Photo-interpretation ? Give a detailed note on its application.

#### **Unit–II**

13. Describe the application of GPS in surveying, mapping and navigation.
14. Explain types of GPS and various GPS satellites.

#### **Unit–III**

15. Explain the history and development of Cartography.
16. Give a detailed note on Cartographic methods and techniques for map preparation.