

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

PGD-436

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

FUNDAMENTALS AND APPLICATIONS OF REMOTE SENSING

Paper - PGD-102

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 in all, 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 in all, selecting *one* question from each Unit (Answer limit **500** words). Each question carries **15** marks.

Section-A

1. Attempt all questions :

- (i) Define Remote Sensing.
- (ii) Draw schematic diagram of electromagnetic radiation spectrum.

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- (iii) What is aerial photography ?
- (iv) What do you mean by parallax ?
- (v) Write any *two* applications of remote sensing.
- (vi) Who is the father of remote sensing ?
- (vii) What is flight planning ?
- (viii) Define Orthophotos.
- (ix) Write the types of remote sensing with examples.
- (x) What are major types of platforms for aerial photographs ? Name them.

Section-B

Unit-I

- 2. Write short note on history and development of remote sensing technology.
- 3. Define atmospheric window. How is it important in remote sensing ?
- 4. Give detailed account on spectral reference curve.

Unit-II

- 5. What is aerial photographs ? Write note on different types, scale and resolutions of aerial photographs.
- 6. What is relief displacement ? Write short note on it.
- 7. How are aerial photographs affected by season, time and topography ? Explain.

Unit-III

- 8. Write differences between aerial photographs and satellite photographs.
- 9. Write short note on application of remote sensing in resource evaluation.
- 10. "Remote sensing technique is playing significant role in natural hazard assessment." Write note in support of the statement.

Section–C

Unit–I

11. Explain the basic concept of remote sensing with diagram. Write detailed note on resolutions in remote sensing.

Or

12. Explain electromagnetic radiations (EMR). Give detailed account on EMR interaction with atmosphere and earth surface.

Unit–II

13. Write notes on the following :

- (i) Satellite remote sensing
- (ii) Geometry of aerial photographs

Or

14. Define aerial photographs. Explain the various platforms of aerial photographs and their pros and cons.

Unit–III

15. Explain the applications of remote sensing in :

- (i) Urban and regional planning
- (ii) Environmental impact assessment

Or

16. What is image interpretation ? Write detailed note on application of remote sensing. Also discuss the elements of visual image interpretation.