

Diploma Course in Geoinformatics (RS, GIS & GPS) [Part Time] (ANNUAL/CR)

Annual Examination: March/April-2023

Geography (Compulsory) Paper-II

DCGT2: Remote Sensing and Digital Image Processing

Day and Date: Monday, 22/05/2023

Total Marks: 60

Time: 3.30 PM To 5.30 PM

Instructions:

1. All Questions are Compulsory.
2. All Questions carry equal marks.
3. Figures to the right indicate full marks

Q.1. Choose the Correct alternatives from the following.

15

- 1 The altitudinal distance of a geostationary satellite from the earth is about:
A) 26,000 km B) 30,000 Km C) 36,000 Km D) 44, 000 Km
- 2 Which type of remote sensing uses its own source of electromagnetic energy?
A) Passive B) Active C) Turbo D) Orbital
- 3 _____ refers to the relative brightness or colour of objects in an image.
A) Tone B) Shape C) Pattern D) Texture
- 4 Which of the following color is having largest frequency in visible spectrum?
A) SWIR B) Thermal IR C) Microwave D) None of these
- 5 The full form of BSQ, BIL, and BIP arerespectively.
A) band-sequential, band-interleaved-by-line, and band-interleaved-by-pixel
B) band-sensors, band-interleaved-by-line, and band-interleaved-by-pixel
C) band-sequential, band-interleaved-by-limit, and band-interleaved-by-pixel
D) None of these
- 6 Which is the best time for taking aerial photograph?
A) 8.00 am to 10.00 am and 2.00 pm to 4.00 pm
B) 5.00 am to 10.00 am and 2.00 pm to 3.00 pm
C) 9.00 am to 10.00 am and 3.00 pm to 4.00 pm
D) All of these
- 7 Which of the following colours is ascribed to the approximate range of .5 to .6 Micrometer?
A) Red B) Green C) Blue D) Yellow
- 8 Which of the following range of electromagnetic spectrum is the visible wavelengths cover?
A) 0.1 Micro Meter to 0.7 Micro Meter
B) 0.2 Micro Meter to 0.7 Micro Meter
C) 0.3 Micro Meter to 0.7 Micro Meter
D) 0.4 Micro Meter to 0.7 Micro Meter

- 9 Living vegetation appears _____ on false-color infrared images.
A) White B) Black C) Blue D) Red
- 10 What does 1mm on a map drawn at a scale of 1:50,000 represent on the ground?
A) 500 centimetres B) 50 centimetres C) 50 metres D) 5 metres
- 11 _____ is the best seasonal month for aerial photography. A) March to September B) June to July C) January to February D) September to October and March to April
- 12 Chorochromatic maps show areal distribution of _____.
A) Land use B) Settlement C) Population D) None of these
- 13 Satellite sensors LISS-I, LISS-II, LISS-III and LISS-IV were on-board _____ series of satellites.
A) Landsat B) NOAA C) IRS D) ERS
- 14 The visible wavelengths cover a range from approximately _____.
A) 0.4 to 0.7 μm B) 0.7 μm to 1mm C) 0.4 to 1mm D) 3.5 and 20 μm
- 15 Which one of the following helps to identify the objects on the earth surface?
A) Atmospheric window B) Signature C) Radiometric error D) None of these

Q.2. Write short Notes (Three out of Four) .

15

- 1 Electro-Magnetic Spectrum
- 2 Scattering
- 3 Atmospheric Windows
- 4 Radiometric Correction

Q.3. Write short Answers (Three out of Four) .

15

- 1 What is Electro-Magnetic Radiation?
- 2 Non-Selective Scattering
- 3 Rayleigh Scattering
- 4 Mie Scattering

Q.4.. Answer the following question on broad. (One out of two).

15

- 1 What is Remote Sensing? Write down various stages in Remote Sensing.
- 2 What is map Sensor? Discuss the various Sensor Resolutions.

Model Answer Paper
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A) 26,000 km B) 30,000 Km C) 36,000 Km D) 44, 000 Km

Option 3

2 Which type of remote sensing uses its own source of electromagnetic energy?

A) Passive B) Active C) Turbo D) Orbital

Option 2

3 _____ refers to the relative brightness or colour of objects in an image.

A) Tone B) Shape C) Pattern D) Texture

Option 1

4 Which of the following color is having largest frequency in visible spectrum?

- A) SWIR B) Thermal IR C) Microwave D) None of these

Option 4

5 The full form of BSQ, BIL, and BIP arerespectively.

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B) band-sensors, band-interleaved-by-line, and band-interleaved-by-pixel
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Option 1

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Option 2

8 Which of the following range of electromagnetic spectrum is the visible wavelengths cover?

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C) 0.3 Micro Meter to 0.7 Micro Meter
D) 0.4 Micro Meter to 0.7 Micro Meter

Option 4

9 Living vegetation appears _____ on false-color infrared images.

- A) White B) Black C) Blue D) Red

Option 4

10 What does 1mm on a map drawn at a scale of 1:50,000 represent on the ground?

- A) 500 centimetres B) 50 centimetres C) 50 metres D) 5 metres

Option 3

11 _____ is the best seasonal month for aerial photography. A) March to September B) June to July C) January to February D) September to October and March to April

Option 4

12 Chorochromatic maps show areal distribution of _____.

- A) Land use B) Settlement C) Population D) None of these

Option 1

13 Satellite sensors LISS-I, LISS-II, LISS-III and LISS-IV were on-board _____ series of satellites.

- A) Landsat B) NOAA C) IRS D) ERS

Option 3

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Option 1

15 Which one of the following helps to identify the objects on the earth surface?

- A) Atmospheric window B) Signature C) Radiometric error D) None of these

Option 2

Q.2. Write short Note (Three out of Four)

1 Electro-Magnetic Spectrum

Ans:

2 Scattering

Ans:

3 Atmospheric Windows

Ans:

4 Radiometric Correction

Ans:

Q.3. Write short Answers (Three out of Four).

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1 What is Electro-Magnetic Radiation?

Ans:

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Ans:

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Ans:

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Ans:

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Ans:

2 What is map Sensor? Discuss the various Sensor Resolutions.

Ans:
