

## FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION, NOVEMBER 2021

## Geology

## GEO 1C 01—INTRODUCTION TO REMOTE SENSING AND GIS

(2019 to 2020 Admissions)

Time : Two Hours

Maximum : 60 Marks

*Answer all questions.**Draw neat sketches, wherever necessary.***Section A**

I. Answer in one or two sentences. Each question carries 2 marks :

- 1 Overlap.
- 2 Relief displacement.
- 3 Fiducial marks.
- 4 Stereo pair.
- 5 Electromagnetic spectrum.
- 6 Atmospheric windows.
- 7 Mie Scattering.
- 8 GIS Software.
- 9 Datum.
- 10 GIS Components.
- 11 Conical projection.
- 12 Cadastral map.

(Maximum 20 marks)

**Section B**

II. Write short notes. Each question carries 5 marks :

- 13 Geometry of aerial photograph.
- 14 Elements of image interpretation.
- 15 Interaction of EMR with Earth surface.
- 16 Capabilities of GIS.
- 17 Elements of a map.

**Turn over**

18 Stages in remote sensing.

19 Types of stereoscope.

(Maximum 30 marks)

**Section C**

III. Write long essay on any *one* of the following. Each question carries 10 marks :

20 Describe the types of aerial photographs based on camera orientation.

21 Explain the various types of maps.

(Maximum 10 marks)

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**FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION  
NOVEMBER 2021**

Geology

GEO 1B 01—ESSENTIALS OF GEOLOGY

(2019—2020 Admissions)

Time : Two Hours

Maximum : 60 Marks

*Answer all ten questions.  
Draw neat sketches wherever necessary.*

**Section A**

I. Answer in one or two sentences (Each question carries 2 marks) :

- 1 Lithosphere.
- 2 Guttenberg discontinuity.
- 3 Sedimentary rocks.
- 4 Pahoehoe lava.
- 5 Caldera.
- 6 Epoch.
- 7 Isoleismal lines.
- 8 Meteorites.
- 9 Epicenter.
- 10 Tsunami.
- 11 Spring tide.
- 12 Slump.

(Maximum 20 marks)

**Section B**

II. Write short notes (Each question carries 5 marks) :

- 13 Silicates.
- 14 Bonding in minerals.

Turn over

- 15 Products of volcanoes.
- 16 Rock cycle.
- 17 Ocean bottom topography.
- 18 Branches of Geology.
- 19 Seismogram and Seismograph.

(Maximum 30 marks)

### Section C

III. Write long essay on any of the following (Each question carries 10 marks) :

- 20 Briefly describe about earthquakes, origin, distribution and prediction of earthquakes.
- 21 Write an essay on volcanoes, their classification, types of eruption and the global distribution of volcanoes.

(Maximum 10 marks)

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Geology

GEO 1C 01—INTRODUCTION TO REMOTE SENSING AND GIS

(2021 Admissions)

Time : Two Hours

Maximum : 60 Marks

**Section A**

*Answer at least **eight** questions.*

*Each question carries 3 marks.*

*All questions can be attended.*

*Overall Ceiling 24.*

1. Overlap.
2. Drift and Crab.
3. Principal point.
4. Fiducial marks.
5. Panchromatic film.
6. Trimetrogon aerial photography.
7. Image parallax.
8. Stereoscopy.
9. Atmospheric windows.
10. Vector data and Raster data.
11. Co-ordinate system.
12. Thematic maps.

(8 × 3 = 24 marks)

**Turn over**

**Section B**

*Answer at least five questions.*

*Each question carries 5 marks.*

*All questions can be attended.*

*Overall Ceiling 25.*

13. Types of aerial photographs based on camera axis.
14. Relief displacement and Vertical exaggeration in aerial photographs.
15. Elements of image interpretation.
16. Photogrammetric instruments.
17. Specular and Diffuse reflection.
18. Important GIS software producers and their products.
19. Types of map projections.

(5 × 5 = 25 marks)

**Section C**

*Answer any one question.*

*The question carries 11 marks.*

20. Discuss the concept of remote sensing with reference to EMR, its characteristics and interaction with atmosphere.
21. What is GIS ? Describe the components and functions of GIS.

(1 × 11 = 11 marks)

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(CBCSS)

Geology

GEO 1B 01—ESSENTIALS OF GEOLOGY

(2021 Admissions)

Time : Two Hours

Maximum : 60 Marks

**Section A**

*Answer at least **eight** questions.*

*Each question carries 3 marks.*

*All questions can be attended.*

*Overall Ceiling 24.*

1. Stratigraphy.
2. Milky Way galaxy.
3. Meteorites.
4. Lithosphere.
5. Big-Bang theory.
6. Eras and Periods.
7. Crystalline and amorphous substances.
8. Ionic bonding in minerals.
9. Scales of measure of earthquakes.
10. Pyroclastic materials.
11. Creeps and slides.
12. Tides and currents.

(8 × 3 = 24 marks)

**Turn over**

**Section B**

*Answer at least **five** questions.*

*Each question carries 5 marks.*

*All questions can be attended.*

*Overall Ceiling 25.*

13. Concept of lithospheric plates and Plate tectonics.
14. Morphological characters of crystals.
15. Silicate and Carbonate minerals.
16. Origin and effects of tsunami.
17. Causes, effects and remedial measures of landslides.
18. Types of seismic waves.
19. Topography of the ocean floor.

(5 × 5 = 25 marks)

**Section C**

*Answer any **one** question.*

*The question carries 11 marks.*

20. Describe the concept of rock cycle highlighting on the types of rocks with suitable 'examples.
21. Give an account of volcanoes with reference to their classification and global distribution.

(1 × 11 = 11 marks)