(Pages : 2)

Name..

Reg. No...................................

THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION, NOVEMBER 2020

Geology

GEO 3C 05—SATELLITE REMOTE SENSING AND GIS DATA MANAGEMENT SYSTEM

Time : Two Hours

Maximum : 60 Marks

Draw neat sketches wherever necessary.

Section A

Answer at least **eight** *questions.*
Each question carries 3 marks.
All questions can be attended.
Overall Ceiling 24.

1. Panchromatic imaging system.

2. SAR.

3. Horn antenna.

4. Launch vehicles.

5. Aryabhatta Satellite.

6. RISAT.

7. Bhuvan.

8. NRSC.

9. SPOT.

10. Analogue and Digital data.

11. Dangles.

12. Sliver polygon.

(8 × 3 = 24 marks)

Section B

Answer at least **five** *questions.*
Each question carries 5 marks.
All questions can be attended.
Overall Ceiling 25.

13. Multispectral scanners.

14. Thermal remote sensing.

15. IRS and INSAT satellite systems.

16. Geostationary meteorological satellites.

17. Database Management System.

18. Edge matching and Rubber sheeting.

19. Types of GIS data queries.

(5 × 5 = 25 marks)

Turn over

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Section C

Answer any **one** *question.*
The question carries 11 marks.

20. Describe the principles and applications of Microwave remote sensing.

21. Give an account of the various methods of GIS data input.

(1 × 11 = 11 marks)

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Name.................................

Reg. No............................

THIRD SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

Geology

GEO 3B 05—CRYSTALLOGRAPHY AND MINERALOGY

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. Rotational Symmetry.

2. Hemihedral and Hemimorphic forms.

3. Law of constancy of interfacial angles.

4. Pyritohedron.

5. Sphenoid.

6. Pinacoids.

7. Trigonal trapezohedron.

8. Carlsbad law and Baveno law.

9. Sclerometer and Pycnometer.

10. Pseudomorphism.

11. Reniform and Botryoidal forms.

12. Diaphaneity.

(8 × 3 = 24 marks)

Section B

Answer at least **five** *questions.*
Each question carries 5 marks.
All questions can be attended.
Overall Ceiling 25.

13. Parameter system of Weiss and Miller indices.

14. Symmetry elements and forms of Normal class of Tetragonal system.

Turn over

15. Form present in then Rhombohedral class of Hexagonal system.

16. Types of twinning in crystals.

17. Kinds and degrees of Luster in minerals.

18. Moh's scale of hardness.

19. Electrical and magnetic properties of minerals.

(5 × 5 = 25 marks)

Section C

Answer any **one** *question.*

Each question carries 11 *marks.*

20. Describe the symmetry elements and forms present in the Normal class of Isometric system.

21. Explain the classification and structural diversity of silicate minerals.

(1 × 11 = 11 marks)

THIRD SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION NOVEMBER 2020

Geology

GLY 3B 05—CRYSTALLOGRAPHY

Time : Three Hours   Maximum : 80 Marks

Draw neat sketches wherever necessary.

Part A

*Answer all **ten** questions in one word **or** one sentence each.*
Each question carries 1 mark.

1. The instrument for measuring the angles of crystals.

2. Define axial ratio.

3. What is a Hemihedral form ?

4. What is Pyritohedron ?

5. What is a Sphenoid ?

6. Name the forms of Rhombohedral class of Hexagonal system.

7. What is Dihexagonal pyramid ?

8. The type mineral of Normal class of Monoclinic system.

9. The crystal system in which calcite crystallizes.

10. What are Geniculate twins ?

(10 × 1 = 10 marks)

Part B (Short Answer Type Questions)

*Answer any **ten** questions.*
Each question carries 2 marks.

11. Morphological characters of crystals.

12. Symmetry elements of crystals.

13. Contact goniometer.

14. Symmetry elements and forms of Tetrahedral class of Cubic System.

15. Typical forms of Tripyramidal class of Tetragonal System.

Turn over

16. Gyroidal class.

17. Tripyramidal class-Tetragonal System: Type mineral and symmetry elements.

18. Tripyramidal class-Hexagonal System: Type mineral and symmetry elements.

19. Trigonal Trapezohedron.

20. Type mineral and symmetry of Sphenoidal class–Orthorhombic system.

21. Polysynthetic twins.

22. Contact and Penetration twins.

(10 × 2 = 20 marks)

Part C (Paragraph Type Questions)

Answer any **five** *questions.*
Each question carries 6 marks.

23. Hemimorphic and Enantiomorphic forms in crystals.

24. Law of constancy of interfacial angles.

25. Forms of Normal class-Hexagonal system.

26. Ditetragonal prism and Ditetragonal pyramid.

27. Domes and Pinacoids of Monoclinic system.

28. Forms of Triclinic System-Normal class.

29. Component parts of a twin crystal.

30. Types of twinning in feldspars.

(5 × 6 = 30 marks)

Part D (Essay Type Questions)

Answer any **two** *questions.*
Each question carries 10 marks.

31. Discuss crystal notation and the parameter system of Weiss and Miller indices.

32. Explain the symmetry elements, forms present and type mineral of the Normal class of Isometric system.

33. Describe the Normal class of Orthorhombic system highlighting on the symmetry elements, forms present and typical minerals.

34. Give an account of the twin laws pertaining to the crystals of Fluorite, Pyrite, Calcite, Aragonite and Gypsum.

(2 × 10 = 20 marks)