

Second Semester B.Sc., Degree Examinations**September / October 2022**

(CBCS NEP Scheme)

GEOLOGY**Paper II : Basics of Crystallography, Mineralogy and Petrology**

Time: 2 hrs.]

[Max.Marks:60

SECTION - A1. *Select the most appropriate answer from options provided : 10X 1= 10 Marks*

- i. The consolidation of sediments _____
A) Igneous rocks
B) Metamorphic rocks
C) Sedimentary rocks
D) None of these
- ii. Sandstone formed by _____
A) Sedimentary process
B) Metamorphic process
C) Igneous origin
D) None of these
- iii. Gneissose structure occurs in _____
A) Gneiss
B) Sandstone
C) Schist
D) None of these
- iv. The consolidation of magma form _____
A) Metamorphic rocks
B) Igneous rocks
C) Sedimentary rocks
D) None of these
- v. Petrology deals with _____
A) Rocks
B) Minerals
C) Fossils
D) None of these
- vi. The plutonic igneous rocks shows _____ texture
A) Coarse grained
B) Fine grained
C) Medium grained
D) None of these
- vii. In which system, quartz crystallize _____
A) Hexagonal
B) Tetragonal
C) Orthorhombic
D) None of these

Contd...2

- viii. Chemical composition CaCO_3 _____
A) Quartz
B) Calcite
C) Felsphar
D) None of these
- ix. Euler's formula is _____
A) $F + A = E + 2$
B) $F + E = A + 2$
C) $E + A + F + 2$
D) None of these
- x. The three or more faces form _____
A) Face
B) Edge
C) Solid angle
D) None of these

SECTION - B

Answer short notes on any FIVE of the following. :

5X 3= 15 Marks

2. Crystal parameters
3. Crystalline and Amorphous
4. Axes of symmetry
5. Laws of reflection
6. Isotropic mineral
7. Crystallinity
8. Granulose structure
9. Limestone.

SECTION - C

Medium Answer questions.

Answer any THREE questions from the following.

3X 5= 15 Marks

10. Rock cycle.
11. Classification of Igneous rocks based on chemical composition.
12. Classification of sedimentary rocks based on grain size and shape.
13. Classification of Tetragonal and mono clinic crystal system based on axial characters.
14. Construction of NiCol prism.

SECTION - D

Answer the following:

2X 10= 20 Marks

15. a) Explain the primary structures of sedimentary rock.

OR

Contd...3

- b) What is texture? Explain the equigranular, Inequigranular and Basaltic textures.
16. a) Describe the holohedral forms of Isometric system.

OR

- b) Describe the physical properties of minerals based on light and state of aggregation.

*** **

Sixth Semester B.Sc., Degree Examinations
September /October 2022
(Semester Scheme)

GEOLOGY

SSF 832: Paper VIII : Remote Sensing and Field Geology

Time: 3 hrs.]

[Max.Marks:50

Instruction to the Candidates :

1. Answer all questions.
2. Draw diagrams wherever necessary.

I. Simple answer questions :

6 X 1= 6 Marks

Answer in a word, or phrase or a sentence.

1. What is a platform in remote sensing?
2. What is meant by reconnaissance survey?
3. What is aerial remote sensing?
4. Expand LISS.
5. What is a base map?
6. What is the altitude of geostationary satellite?

II. Short answer questions.

Answer any TWO of the following.

2 X 3= 6 Marks

7. What are the types of sensors?
8. Write about the types of traverse.
9. What are principal and nadir points in aerial photography?

III. Medium answer questions.

Answer any THREE of the following.

3X6= 18 Marks

10. Describe the types of resolutions.
11. Explain the types of stereoscopes.
12. Describe the types of maps used by geologists.
13. Describe the types in aerial photography according to camera axis and Lens.

Contd...2

IV. Long answer questions :

2X10=20 Marks

Answer any TWO of the following.

14. Describe the flight plan procedures.
15. Explain the interaction of EMR with atmosphere and earth surface.
16. Explain a) Determination of strike and dip
b) Principles of GIS and GPS

Geology-

Third Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

GEOLOGY

SSC 830: Paper III : Petrology

Time: 3 hrs.]

[Max.Marks:50

Instruction to the Candidates :

1. Answer all questions.
2. Draw diagrams wherever necessary.

I. Simple answer questions :

6 X 1= 6 Marks

Answer the following in a word or a sentence.

1. Define structure.
2. What is magma ?
3. What is a Sill ?
4. What is clastic texture?
5. Define Sediments.
6. Name the rock which exhibit graphic texture.

II. Short answer questions.

Answer any TWO of the following.

2 X 3= 6 Marks

7. Vesicular and amygdaloidal structures.\
8. Classification of sedimentary rock based on origin.
9. Contact Metamorphism.

III. Medium answer questions.

Answer any THREE of the following.

3X6= 18 Marks

10. Classification of Igneous rocks based on mineralogy of chemical composition.
11. Bowen's reaction principle.
12. Process of Sedimentation.
13. Agents of Metamorphism.

Contd...2

IV. Long answer questions :

2X10=20 Marks

Answer any TWO of the following.

14. Describe the discordant bodies.
15. Describe the primary structure of Sedimentary rock.
16. Explain :
 - a) Metamorphism on Calcareous rocks
 - b) Schistose and Gneissose Structure.

Fifth Semester B.Sc., Degree Examinations

April / May 2022

(Semester Scheme)

GEOLOGY

SSE 831: Paper VI : Engineering Geology and Mining Geology

Time: 3 hrs.]

[Max.Marks:50

Instruction to the Candidates :

1. Answer all questions.
2. Draw diagrams wherever necessary.

I. Simple answer questions :

6 X 1= 6 Marks

Answer the following in a word or a phrase or in a sentence

1. What is Tunnel ?
2. Name the Biggest dam in India.
3. Define Stope.
4. Define Grade of ore.
5. What is Peddock ?
6. What is the compressive strength of sandstone?

II. Short answer questions.

Answer any TWO of the following.

2X 3= 6 Marks

7. Role of Geology in the field of engineering.
8. Mine Safety.
9. Drilling bits.

III. Medium answer questions.

Answer any THREE of the following.

3X6= 18 Marks

10. Properties of rocks required for their selection as building stones.
11. Geological problems after the dam constructions.
12. Terminology of mining.
13. Glary hole and Kooling mining.

Contd...2

IV. Long answer questions :

2X10=20 Marks

Answer any TWO of the following.

14. Describe the Geological consideration in selection of tunnel site.

15. Describe the Alluvial Mining Methods.

16. Explain :

a) Building Stones of India Granite & Basalt

b) Types of drilling Bits.
