F–6534	Sub. Code
	7MGE1C3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

First Semester

GEOLOGY

STRATIGRAPHY AND PALAEONTOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Write with neat diagrams and illustration possible.

Part A (10 × 2 = 20)

Answer **all** questions.

1. Classification of stratigraphy
2. Define Sequence stratigraphy
3. Whether there is any advent of life in Cuddapahs
4. What is the significance of Bagh beds?
5. Mention stratigraphic location of siwaliks
6. Define saline series of India.
7. Note on Lepidodentron.
8. Distinguish between Glossopteries and Gangamopteres.
9. Write few words about Orchiopetrics.
10. Economic value of foraminifers.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a note on European stratigraphy.

Or

(b) Give an account on application of chemo stratigraphy.

12. (a) Describe the stratigraphy and mineral resources of Gondwanas.

Or

(b) Give an account on the stratigraphic succession of Triassic of Spiti.

13. (a) Describe the stratigraphy of saline series.

Or

(b) Strategy of Quaternary formations

14. (a) Enumerate Historic concept of evolution.

Or

(b) Write shortly on stratigraphic significance of Tertiary flora

15. (a) Brief accounts on vertebrates with reference to geologic time.

Or

(b) Give a brief note on spores and pollens.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write an essay on sequence stratigraphy.

17. Discuss in detail about Jurassic of Kutch

18. Give a detailed account on K-T transition in India.

19. Discuss the evolution and stratigraphic importance of Ammonites.

20. Write an elaborate note on Application of micropalaeontology for petroleum exploration and marine geology.

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F–6535	Sub. Code
	7MGE3C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

GEOLOGY

ENGINEERING GEOLOGY, MINING GEOLOGY AND ORE DRESSING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define rock clasticity.

2. What is natural aggregates?

3. Expand TBM.

4. What is mean by dock?

5. Define rock drill bits.

6. Define dredging.

7. List a few types of mine supports.

8. What is top slicing?

9. Name any four types of rock crushers.

10. Give any two differences between vibrating screens and shaking tables.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Give a brief account of stress and strains.

Or

(b) Describe the properties of building stone.

12. (a) Enumerate the geological problems related to dam construction.

Or

(b) What suggestions you would like to make for protecting coastal erosion?

13. (a) Describe mine shaft with a sketch.

Or

(b) Outline clay mining methods.

14. (a) Write a brief account of room and pillar method of mining.

Or

(b) Briefly describe the factors controlling the choice of mining methods.

15. (a) Elaborate the fundamentals of ore size reduction.

Or

(b) Examine the role of ball mills in ore processing.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain engineering properties of rocks.

17. Discuss the significance of geological investigations for tunnel construction.

18. Explain opencast mining methods.

19. How groundwater problem affects the mining operations? Explain in detail.

20. Write an essay on the principles and scope of mineral processing.

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F–6536	Sub. Code
	7MGE3E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Geology

Elective — REMOTE SENSING, GIS AND COMPUTATIONAL GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define remote sensing.

2. What is Row and Swath?

3. Define IFOV.

4. What are the types of satellites?

5. Define Image restoration.

6. Define level slicing.

7. Define GIS.

8. Define Raster Data.

9. Define Digital image.

10. What is the Negative binomial distribution?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a note on Stefan Boltzman's law.

Or

(b) Describe active and passive remote sensing system.

12. (a) Give an account on photographic and charge couple devices.

Or

(b) Write note on sensor and their resolutions.

13. (a) Define visual interpretation. Add note on elements of image interpretation.

Or

(b) Give an account on contrast manipulation and contrast stretching.

14. (a) Describe Data analysis and manipulation in GIS.

Or

(b) Write short note on the spatial data structure.

15. (a) Describe fundamentals and applications of MS Office.

Or

(b) Write short note on Baye's Theorem.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on energy interaction with the Earth surface's features.

17. Write an essay on Indian Space Programme: Past, Present and Future.

18. Explain about the Multispectral band ratioing and differencing and color space transformation.

19. Discuss about the interpretation of lithological and structural mapping.

20. Write detailed note on Poisson distribution, discrete random variable and Geometric distribution.

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F–5465

Sub. Code
7MGE1C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Geology

GEOMORPHOLOGY AND MARINE GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Diastrophism.

2. List out two coastal and two fluvial landforms.

3. Erosion cycle.

4. Define Geomorphic cycle.

5. Shore line.

6. What are ocean currents?

7. Define pollution.

8. Longshore current.

9. List out any four effects of sea level rise.

10. What is metallic pollution?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a short note on karst topography.

Or

(b) Explain how lithology controls the geomorphological features.

12. (a) List out the five features of the Coastal Geomorphology and add a note on it.

Or

(b) Give an account on Coastal Geomorphic features.

13. (a) What are submarine Canyons and how it is formed?

Or

(b) Give an account on the four types of Erosion by rivers.

14. (a) Write a short essay on classification of marine environment.

Or

(b) Write a brief note on the Chemical properties of sea water.

15. (a) Discuss the impact of radioactivity on coastal environments.

Or

(b) Give an account on the classification of deep sea sediments.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Give a detailed account on the Limestone weathering and Karst Topography.

17. Detail the major geomorphic features of India.

18. Write an essay on alluvial landforms.

19. Write an essay on continental margin and shelf.

20. Write an essay on marine pollution and its effects.

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F–5466

Sub. Code
7MGE1C2

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Geology

GEOTECTONICS AND STRUCTURAL GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Mobile zones.

2. What is Geosynclines?

3. Write a short note on Submarine Canyons.

4. Define Outcrop.

5. Write a short note on Bedding Fissility.

6. What is Mylonite?

7. Define Joints.

8. Write a short note on Structure Fabrics.

9. Write a note on the Types of Cleavage.

10. Define Tectonites.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the internal structure of the earth.

Or

(b) Describe the mid oceanic ridges.

12. (a) Give the characteristics of Contours.

Or

(b) Describe briefly on the types of Lineation.

13. (a) Give an account on Salt Domes.

Or

(b) Define Tectonites. Explain their symmetry.

14. (a) Describe about the Origin of Minor structures with in Shear Zone.

Or

(b) Explain the different types of Unconformities.

15. (a) Write brief note on Brunton Compass.

Or

(b) What are Cleavage and Schistosity? Describe the importance types of Cleavage.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on Plate Tectonics.

17. Write detailed notes on Foliation in rocks.

18. Write an essay on Techniques adopted in Petro Fabric analysis.

19. Describe the detailed noted on the distinguishing unconformities from Faults.

20. Describe in detailed notes on:

    (a) The scope of Structure Geology.

    (b) The preparation of a Geological report.

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F–5468	Sub. Code
	7MGE1E1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Geology

Elective: ENVIRONMENTAL GEOLOGY AND DISASTER MANAGEMENT

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. List out the uses of mining wastes.

2. Write a note on the Alternative Renewable energy sources?

3. What is bioaccumulation?

4. Write a short note on biosphere.

5. Define landslide.

6. What is an Earthquake?

7. List out the effects of deforestation.

8. List out the benefits of Volcanism?

9. List out the sampling methods for air pollution.

10. List the benefits of river flooding.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write an account on the environmental interaction between atmosphere and hydrosphere.

Or

(b) Give an account on Sewage pollution.

12. (a) Discuss the causes and effects of Ozone depletion.

Or

(b) Discuss on the pollutants types.

13. (a) Write an account on the hazard related to floods.

Or

(b) Write a brief note in the Landslides causative factors.

14. (a) Bring out and explain any one international agreement on environment.

Or

(b) What are the different disaster recovery approaches?

15. (a) Give an account on the soil contamination.

Or

(b) Give an account on the degradation of coastal environment.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on the concept and principle of environmental geology.

17. Give a details account on Global warming and its impact on the earth system.

18. Write an essay on water pollution and its effects on human health.

19. Describe the classification and distribution of soil in India.

20. Elaborate the impact of mining on the environment.

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F–5469

Sub. Code
7MGE3C1

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

Third Semester

Geology

ECONOMIC GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define geothermometry.
2. What is supergene enrichment?
3. State gold distributions in India.
4. List the uses of barite.
5. Write the physical properties of refractories.
6. Name any four radioactive minerals.
7. Define mineral grade.
8. What is mean by mineral conservation?
9. Write a note on polished sections.
10. Define ore textures.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Give a short account of the cavity filling deposit.

Or

(b) Exemplify the end-use classification of mineral deposits.

12. (a) Write mode of occurrences of bauxite deposits.

Or

(b) Describe iron ore distributions in India.

13. (a) Mention the chemical and physical properties of mineral pigments.

Or

(b) Elucidate the characteristics of precious minerals.

14. (a) Describe the significance of minerals in the national economy.

Or

(b) Write note on strategic and Critical minerals with the status in India.

15. (a) State the procedure for polishing and mounting of ores.

Or

(b) Explicate optical properties of ore minerals.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss the sedimentation process of mineral formations.

17. Write an essay on copper deposits regarding its origin, Indian distribution and uses.

18. Mention abrasives minerals and detail out their occurrences and distribution in India.

19. Explain Orissa estimation techniques.

20. Discuss taxes and the role for understanding the paragenesis of ore minerals.

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