F–9087	Sub. Code
	7BGE2C1

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Second Semester

Geology

PALAEONTOLOGY AND GENERAL STRATIGRAPHY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define fossil.

2. What is index fossil?

3. Distinguish between zaphrentis and favosites.

4. What is madreporite?

5. Distinguish between pelecypod and brachiopod shells.

6. Give any two examples for monomyrian shells.

7. What is lepidodendron?

8. Name the trilobite variety which is blind.

9. Define homotaxis.

10. What does Biostratigraphy deals with?

Part B (5 × 5 = 25)

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

11. (a) Give an outline on the geological history of foraminifera.

Or

(b) Write an account on the general morphology of sponges.

12. (a) Write a brief account on the geological history of echinoids.

Or

(b) Write a brief account on the geological history of crinoids.

13. (a) Distinguish between articulata and inarticulata.

Or

(b) Write a brief note on the geological history of brachiopods.

14. (a) Describe the stratigraphic importance of graptolites.

Or

(b) Describe the plant fossils: glossopteris and ptilophyllum.

15. (a) Explain Walther's law of facies.

Or

(b) Write a short account on the types of correlation.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write an account on the nature and modes of preservation of fossils.

17. Write an essay on the morphology and classification of corals.

18. Discuss the classification and geological history of phylum mollusca.

19. Draw a trilobite fossil and describe its morphological characters.

20. Write an essay on the imperfections in Geological record.

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F–9088

Sub. Code
7BGE4C1

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Fourth Semester

Geology

INDIAN STRATIGRAPHY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Stratification.

2. What are the stratigraphic units of India in Tertiary traps?

3. Define Khondalites.

4. What are formal and informal units?

5. Write the division of the Archean succession of Bastar craton.

6. Define the Haimanta system.

7. What are index fossils?

8. Define Bagh beds.

9. What is the age of murree group? and name the rocks in it.

10. Where do you find the Panna diamonds?

Part B (5 × 5 = 25)

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

11. (a) Give an account on lndo-Gangetic plain.

Or

(b) Short notes on Sausar series.

12. (a) What are the economic importance of Cuddapah system.

Or

(b) Short notes on Precambrian of Tamil Nadu.

13. (a) Write the age of Saline series.

Or

(b) Give a short notes on spiti valley of Triassic system.

14. (a) What is the stratigraphy and mineral wealth of Cretaceous of Trichinopoly.

Or

(b) Write an account on the classification Gondwana supergroup.

15. (a) What are karewa formations. Give details.

Or

(b) Short notes on rise of the Himalayas.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Brief notes on physiographic divisions of India

17. Elaborate the Vindhyan system and explain its stratigraphy and economic importance.

18. Give a detail note on lithology and stratigraphy of Cambrian of salt range

19. Give a account marine mesozoic formation of India and mention their assemblages

20. Write an essay on the Siwalik system and its stratigraphic distribution, rock types and fauna.

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F–9089

Sub. Code
7BGE4C2

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Fourth Semester

Geology

STRUCTURAL GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Write a short note on apparent dip.

2. What is a topographic map?

3. Define strain.

4. What is isoclinal fold?

5. Define thrust fault?

6. What is rupture?

7. Define inliers.

8. What is klippe?

9. What is Disconformity?

10. What is Angular Unconformity?

Part B (5 × 5 = 25)

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

11. (a) Give a brief account on 'topographic map'.

Or

(b) Give an account on Attitude of planes.

12. (a) Explain the stages of deformation.

Or

(b) Describe the criteria for recognition of folds.

13. (a) Write a short note on parts of faults.

Or

(b) Describe slip faults.

14. (a) Describe the types of joints.

Or

(b) Explain Nappe.

15. (a) Describe overlap and off lap.

Or

(b) Write a short note on clinometer compass

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on the basic concepts of topographic maps.

17. Explain the types of folds.

18. Describe the faults and their types.

19. Describe the different types of joints with neat sketches.

20. Mention the adjustments and working of the Brunton compass.

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F–9090

Sub. Code
7BGE6C1

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Sixth Semester

Geology

ECONOMIC GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. Differentiate ore and Gangue.

2. Define evaporation process of ore formation.

3. What is meant by ore shoot?

4. Mention the host rock and ore minerals occurring in Kanjamalai and Noamundi.

5. Write any four uses of copper ore.

6. List the Chromium ore deposits in Tamilnadu.

7. Mention any four mineral used in abrasive and refractory industries.

8. Based on Carbon content list the grade of Coal.

9. Define fossil fuel.

10. List any two petroliferous formation India

Part B (5 × 5 = 25)

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

11. (a) Discuss about the Placer deposit process.

Or

(b) Describe the various factors controlling the generation of materials of a mineral deposit.

12. (a) Describe about the contact metasomatic process.

Or

(b) Describe the methods of geothermometry as applied to ore minerals.

13. Write the diagnostic physical properties, uses, mode of occurrence and distribution in India of the following industrial minerals,

(a) (i) Aluminum

(ii) Copper

Or

(b) (i) Uranium

(ii) Thorium

14. (a) Explain the minerals used in the paint and pigment industries.

Or

(b) Describe the minerals used in the glass and ceramic industries.

15. (a) Write an essay about coal formation with reference to Tamilnadu.

Or

(b) Discuss about the origin, occurrence and distribution of petroleum in India.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain the evaporation and metamorphic process of ore formation

17. Describe in detail the Bateman's scheme of classification of mineral deposits.

18. Briefly describe the minerals related to Fertilizer industry.

19. Discuss about the quality, mode of occurrence and distribution of building stones in India.

20. Write an essay about economic mineral wealth of Tamilnadu.

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F–9091	Sub. Code
	7BGE6C2

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Sixth Semester

Geology

REGIONAL GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Fault.

2. Name any two types of fold with neat sketch.

3. Write short notes on Kolar group.

4. Give an outline of Upper Gondwana rocks of Terani

5. Write short notes on peninsular Gnessic complex of Bhavani group.

6. Define Cuddalore sandstone.

7. Write short notes on Kollimalai.

8. Give an outline of Teri sands of Ramanathapuram.

9. What are the uses of iron ore of Kavuthimalai.

10. Define Graphite beds of Sivaganga.

Part B (5 × 5 = 25)

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

11. (a) Give short account on Eastern Ghats mobile belt of Tamilnadu.

Or

(b) Describe about the Moyar-Bhavani Shear Zone.

12. (a) Brief discussion about Granites of Tamilnadu.

Or

(b) Write short notes on Corbonatite complexes.

13. (a) Describe Upper Gondwana rocks of Terani and Uttattur formation.

Or

(b) Give detailed account of Cretaceous formation of Trichirapalli.

14. (a) Write short notes on Mio-Pliocene rocks of Tamilnadu.

Or

(b) Give an outline of Lateritic deposits of Eocene in Tuticorin.

15. (a) Discuss about Bauxite deposits of Shevroy hills of Salem.

Or

(b) Write Short notes on placer deposits of southern Tamilnadu.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Give detailed account of Structural and Tectonic division of Tamilnadu.

17. Elaborately discuss about Sathyamanagalam Group of Central and NW Tamilnadu.

18. Briefly explain about Sithampoondi Anorthosite complex.

19. Discuss about Pliestocene rocks along the coastal tracts of Tamilnadu.

20. Discuss on Precious and Semi-Precious stones of Tamilnadu.

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F–9092	Sub. Code
	7BGEE3A

B.Sc. DEGREE EXAMINATION, APRIL 2023.

Sixth Semester

Geology

Elective-PHOTOGEOLOGY, REMOTE SENSING, GIS AND MINING GEOLOGY

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. What are mosaics?

2. Differentiate side lap and overlap.

3. What is image interpretation?

4. Write a short note on the shadow of image elements.

5. Define sensor.

6. What is the meaning of platform and its types.

7. Define topology

8. List out the statistical operations in GIS analysis.

9. What is tenor?

10. Differentiate winze and raise.

Part B (5 × 5 = 25)

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

11. (a) Write a brief note on types of films.

Or

(b) Discuss in detail the types of stereoscopes.

12. (a) Describe the geotechnical photo recognition elements.

Or

(b) Define Texture and Pattern. Add a note on its shapes.

13. (a) Write a note on spectral and spatial resolution.

Or

(b) Briefly explain the types of sensors.

14. (a) Highlight the need and importance of buffering in GIS.

Or

(b) Write a note on GPS and its components.

15. (a) Brief account on open cast mining.

Or

(b) Short account on critical and essential minerals.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Categorize the types of aerial photographs with neat sketches.

17. Give an account on applications of aerial photographs in groundwater exploration.

18. Elucidate the EMR interaction with earth surface features.

19. Exemplify the spatial data structure of GIS with neat a sketch.

20. Demonstrate the following underground mining methods: (a) Room and Pillar mining (b) Shrinkage Stopping methods.

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