

AF-3479

BGE1C1

B.Sc. DEGREE EXAMINATION, APRIL 2011

First Semester

Geology

DYNAMIC GEOLOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List out the planets of our solar system.
2. Define Dust cloud hypothesis.
3. Define Contraction theory.
4. Define a volcanoes.
5. Define Seismogram.

6. What are the different earth ?
7. Write a short note on primary waves.
8. Define Continental drift.
9. Write a short note on Plate margin.
10. Define Plate tectonics.

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' **or** 'b'.

11. (a) Briefly explain the Nebular hypothesis on Origin of the earth.

(Or)

- (b) Discuss in detail about the Continents.

12. (a) Briefly explain the classification of mountains.

(Or)

(b) Explain in detail about the Isostasy.

13. (a) Discuss in detail about the age of the earth.

(Or)

(b) Explain in detail about the causes of Volcanoes.

14. (a) Briefly explain the distribution of earthquakes.

(Or)

(b) Explain in detail about the Interior of the earth.

15. (a) Briefly discuss the Sea floor spreading mechanism.

(Or)

- (b) Elaborate the mechanism of plate motion.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on Solar system.
17. Describe in detail about the Plate Tectonic theories.
18. Write an essay on various Dating methods.
19. Write an essay on effects and causes of Earthquakes.
20. Write an essay on concept and evidences of Continental Drift theories.

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BGE1C2

B.Sc. DEGREE EXAMINATION, APRIL 2011

First Semester

Geology

GEOMORPHOLOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is geomorphic agent ? List them.
2. Define Weathering.
3. Define Aquifuge.
4. What is perched aquifer ?
5. Define River Terraces.

6. Explain—Base level of erosion.
7. Write a short note on Glacial Epochs.
8. Define Glacial wastage.
9. Write a short note on Marine erosion and deposition.
10. Define Abyssal plain.

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' **or** 'b'.

11. (a) Briefly explain about the Mass wasting.

(Or)

- (b) Discuss in detail about the degradation and aggradations process in the geomorphic studies.

12. (a) Briefly explain the Groundwater and its subsurface zones.

(Or)

(b) Explain in detail about the Porosity and Permeability.

13. (a) Discuss in detail about the Drainage patterns.

(Or)

(b) Explain in detail about the fluvial cycle of erosion.

14. (a) Briefly explain the types of Glaciers and their movement.

(Or)

(b) Explain in detail about Glacial epochs.

15. (a) Briefly discuss the types of Shorelines.

(Or)

- (b) Describe briefly about the Coral reefs types and origin.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on Weathering and its types.
17. Write an essay on Geological work of running water and its landforms produced.
18. Enumerate in detail about the Geological action and landforms produced through Glacial action.
19. Write an essay on causes of Glaciation.
20. Write an essay on Marine erosion, deposition and resulting landforms.

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BGE2C1

B.Sc. DEGREE EXAMINATION, APRIL 2011

Second Semester

Geology

PALAEONTOLOGY AND STRATIGRAPHY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Palaeontology.
2. Describe Globigerina.
3. Write note on anthozoa.
4. Draw a neat sketch on pelecypods.
5. Define a fossil.

6. Describe Rhynconella.
7. Morphology of Trilobites.
8. Compare Olinus and Olenellus.
9. Laws of stratigraphy.
10. Homotaxis.

Part B

(5 × 5 = 25)

Answer **all** questions in 250 words
choosing **either** 'a' or 'b'.

11. (a) Write about the Nature and mode of preservation of fossils.

(Or)

- (b) Describe the morphology of Nummulites.

12. (a) Outline the classification of corals and its geological history.

(Or)

(b) Describe the morphology of the following :

(i) Coelenterata.

(ii) Crinoids.

13. (a) How ammonoid shells differ from other cephalopods ?

(Or)

(b) Describe the morphology and classification of Brachiopods.

14. (a) Briefly describe the classification of Graptolidea.

(Or)

(b) Morphology of Trilobites.

15. (a) Write explanatory note on principles of stratigraphy.

(Or)

(b) Describe the stratigraphic classification.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the General morphology and classification of following invertebrates.

(a) Phylum protoza.

(b) Phylum porifera.

17. Write an essay on mode of preservation of fossils.

18. Write an essay on general morphology and classification of pelecypods.

19. Describe the following fossils :

(a) Glossopteris.

(b) Gangamopteris.

(c) Sigillaria.

20. Write an elaborate note on physical and biological criteria of correlation.

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BGE3C1

B.Sc. DEGREE EXAMINATION, APRIL 2011

Third Semester

Geology

CRYSTALLOGRAPHY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Draw suitable sketches wherever necessary.

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define a Crystal.
2. What is an Amorphous form ?
3. What are the elements of symmetry ?
4. Write two examples for minerals crystallising in the normal class of Triclinic system.

5. Write the symmetries of Diamond.
6. What are the different classes of orthorhombic system ?
7. Give the axial relationship of Tetragonal system.
8. What are secondary twins ?
9. Name two minerals of Normal class of Hexagonal system.
10. Write the symmetry of mineral wulfenite.

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' or 'b'.

11. (a) Explain the plane of symmetry in crystals.

(Or)

(b) Give a brief account on zenee and crystal forms.

12. (a) Write note on Galena and Apatite crystal.

(Or)

(b) Explain the basis of classification of crystals into systems.

13. (a) Give an account on the symmetries and forms of Triclinic system.

(Or)

(b) Write a brief account on the symmetries, forms and type mineral of the pyramidal Hemimorphic class in Hexagonal system.

14. (a) Write the symmetries and forms along with their type mineral of Normal class in Monoclinic system.

(Or)

(b) Write the symmetries of the Normal class and sphenoidal class of orthorhombic system.

15. (a) Describe the different laws of twinning.

(Or)

(b) Give a brief note on twin plane, twin axis and composite plane.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe in detail the Morphological characters of crystals.

17. Explain the Holohedral, Hemihedral and Enantio morphous forms of crystals.

18. Describe the symmetries, classes, forms indices and type minerals of the Tetragonal system.

19. Define Crystal twin. Describe the evidences of twinning with examples.
20. Explain the different forms of Rhombohedral class in Hexagonal system.

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BGE4C1

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fourth Semester

Geology

MINERALOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

Define the following :

1. Mineral.
2. Pseudomorphism.
3. Plane polarized light.
4. Optical accessories.
5. Optic axis.

6. Extinction angle.
7. What is chemical composition of wollastonite ?
8. What is microcline twinning ?
9. Name any four clino pyroxenes with chemical composition.
10. What are Accessory minerals ?

Part B

(5 × 5 = 25)

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

11. (a) Write a note on the physical properties of mineral.

(Or)

- (b) Write note on Isomorphism and Polymorphism.

12. (a) Write a note on general characteristics of light.

(Or)

(b) Differentiate between Isotropism and Anisotropism.

13. (a) What is an extinction angle and how it is determined?

(Or)

(b) Write about pleochroism with examples.

14. (a) Give a short account on paragenesis of sodalime Feldspars.

(Or)

(b) What are silica group of minerals?

15. (a) Give an account on distinctive physical and optical properties of olivine.

(Or)

- (b) Describe the physical and optical properties of Tourmaline.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe about the physical properties of minerals.
17. Write in detail about optical accessories and describe with neat sketches and their uses.
18. Write an essay on the optical character of biaxial minerals.
19. Write an elaborate essay on physical, optical and chemical composition, mode of occurrence of Feldspar group minerals.
20. Write an essay on physical, optical properties, chemical composition uses and mode of occurrences of Garnet.

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BGE4C2

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fourth Semester

Geology

INDIAN STRATIGRAPHY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define order of Superposition.
2. What is Eparchean Unconformity ?
3. Enumerate the basis of classification of Triassic system.
4. Give any two economic importance of Vindhyan system.
5. Define Neobolus beds.

6. Write any two characteristics of Umia series of Jurassic system.
7. Name any three plant fossils.
8. Define Raniganj stage.
9. Define Bagh beds.
10. What is the Lithological division of Jainta series ?

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' **or** 'b'.

11. (a) Discuss the classification of Dharwar system in India.

(Or)

- (b) Describe the major physiographic division of India.

12. (a) Explain salt range of Cambrian system.

(Or)

(b) Write the economic importance of Cuddapah basin.

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

(Or)

(b) Write notes on the characteristics of Jurassic of Kutch and their faunal assemblages.

14. (a) Write a brief account on Paleoclimate and Sedimentation of Gondwana sequence.

(Or)

(b) Give an account of Inter trappean beds.

15. (a) Discuss the Kurnool system in detail with respect to the environment of deposition.

(Or)

- (b) Discuss the stratigraphy of Warkala beds and Cuddalore sandstones.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Compare the drainage system of Peninsula and extra Peninsula.
17. Write an essay on the stratigraphy and sedimentation of Cuddapah super group.
18. Give an account of Gondwana group of rocks found in India and add a note on the divisions.
19. Explain Cenomanian transgression. Give the stratigraphic and peletonologic account on cretaceous of Trichinopoly.
20. Explain the distribution, economic importance of Oligolene and Miolene rocks of Asam.

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BGE5C1

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fifth Semester

Geology

IGNEOUS PETROLOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

Define the following.

1. Chemical composition of the earth.
2. Pyroclastic deposits.
3. Pillow structure.
4. Inequigranular.
5. Megascopy.

6. Shands Saturation principles.
7. Syanite.
8. Pegmatites.
9. Unicomponent magma.
10. Differentiation.

Part B

(5 × 5 = 25)

Answer **all** the questions.

11. (a) Write a brief note on Intrusive forms of Igneous rocks.

(Or)

- (b) Compare Concordant and Discordant forms.

12. (a) Write short notes on Textures of Igneuous rocks.

(Or)

(b) Write a brief note on sheet, mural and columnar joints.

13. (a) Explain the principles and parameters in the classification of Igneous rocks.

(Or)

(b) Write a brief account on Tyrrels Tabular classification.

14. (a) Write the petrographic characteristics of Gabbro.

(Or)

(b) Write brief account on origin of Anorthosites.

15. (a) Write short note on Incongruent melting.

(Or)

- (b) Write a brief note on crystallization of Unicomponent magma.

Part C

(3 × 10 = 30)

Answer any **three** questions in 1000 words each.

16. Explain the composition and constitution of Magma.
17. Explain in detail about the structures of Igneous rocks.
18. Explain in detail about C.I.P.W. classification of Igneous rocks.
19. Write in detail about origin and petrographic characters of Alkaline rocks.
20. What is solid solution ? Describe the phenomenon drawing with suitable examples from the mineral group.

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BGE5C2

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fifth Semester

Geology

**SEDIMENTARY AND METAMORPHIC
PETROLOGY**

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Mention different kinds of meta morphism.
2. Define Clastic and Non-clastic texture.
3. Define Soil.
4. Distinguish between Shale and Sandstone.
5. Define Salt deposits.

6. Define Guano.
7. Define Migmatite.
8. Define Anataxis.
9. Define Plutonic metamorphism.
10. Define Metasomatism.

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' **or** 'b'.

11. (a) Explain briefly different Sedimentary processes.

(Or)

- (b) Explain briefly the mechanical and chemical structures in sedimentary rocks.

12. (a) Explain briefly the mode of formation and characteristics of Terrarossa.

(Or)

(b) Explain briefly the Arenaceous group of rocks.

13. (a) Explain briefly the calareous deposits.

(Or)

(b) Explain briefly the Carbonaceous deposits.

14. (a) Explain the structure and texture of Migatite.

(Or)

(b) Write a brief note on Palingenesis.

15. (a) Explain injection metamorphism.

(Or)

(b) Give petrographic description of the following :

(i) Quartzite.

(ii) Slate.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail the clastic and Non-clastic textures of Sedimentary rock.
17. Write an essay on residual deposits and their mode of formation.
18. Write an essay on organic deposits with examples.
19. Detail the Metamorphic structures and textures.
20. Write an essay on Metasomatic processes.

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BGEE1A

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fifth Semester

Geology

Elective—FIELD GEOLOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Fossils.
2. Explain the term Reserves.
3. Write a note on apparent dip.
4. What are topographic features ?
5. What is meant by vertical thickness ?

6. Give the objectives of thickness measurement of beds.
7. Write a short note on chip sampling.
8. List out the uses of Clinometer compass.
9. Define Scale of map.
10. Mention any four structural features along with their map symbols.

Part B

(5 × 5 = 25)

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

11. (a) State the contribution of field equipments during the geological investigations.

(Or)

- (b) Bring out the places of interest for field geologist.

12. (a) How contour maps are interpreted ?

(Or)

(b) Explain the methods of representing topographic features on maps.

13. (a) State the relationships between True thickness and Vertical thickness.

(Or)

(b) What are the conditions influencing for repetition of outcrops ?

14. (a) What kind of care should be taken while packing the samples ?

(Or)

(b) Distinguish between Channel samples and Car samples.

15. (a) Write a brief note on orientation of topographic map in the field.

(Or)

(b) Give an outline of preparation of geological map.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Discuss the different types of rock drills.
17. Define the terms strike, dip and true dip. Explain their relationships in detail.
18. Give a detailed account on calculation of true and vertical thickness from field data.
19. Give a descriptive account on the methods of preparation of geological reports.
20. Write short notes on the following :
 - (a) Conventional signs.
 - (b) Map references (Indexing)
 - (c) Locating the position of outcrop.
 - (d) Plotting attitude of beds.

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BGEE1B

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fifth Semester

Geology

**Elective—ENVIRONMENTAL GEOLOGY AND
MARINE GEOLOGY**

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions in few words.

Define the following :

1. Environmental Geology
2. Soil erosion.
3. Seismicity.
4. Volcanism.

5. Coastal environment.
6. Urbanization.
7. Seafloor spreading.
8. Mid-Oceanic ridges.
9. Coriolis effect.
10. Mineral resources of ocean.

Part B

(5 × 5 = 25)

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

11. (a) Write a short account of renewable and non-renewable resources.

(Or)

(b) What are various causes of flood ?

12. (a) Write short notes on hazards of volcanism.

(Or)

(b) What are the influence of deep seated Geological processes ?

13. (a) What are the various environmental degradation due to mining.

(Or)

(b) What are the effects of urbanization on surface water ?

14. (a) Note on Continental drift theory.

(Or)

(b) Short note on classification of coast.

15. (a) Chemical properties of ocean water.

(Or)

(b) Short notes on Tides and their types.

Part C

(3 × 10 = 30)

Answer any **three** questions in 1000 words each.

16. Write an essay on environmental problems due to surface geological processes.
17. What are various techniques for volcanic prediction.
18. Explain in detail how man act as an agent for environmental modification.
19. Write an elaborate note on physical features and origin of ocean basin.
20. Write in detail about ocean circulation of wave and current.

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BGEE2A

B.Sc. DEGREE EXAMINATION, APRIL 2011

Fifth Semester

Geology

**Elective—HYDROGEOLOGY AND ENGINEERING
GEOLOGY**

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is an Aquifer ?
2. Define a Piezometric surface.
3. What is laminar flow ?
4. Define Turbulent flow.
5. List the Physical Qualities of Groundwater.

6. Define Ohms Law.
7. List any two geological investigations needed for highway construction.
8. Name any two engineering properties of rocks.
9. What is Coastal erosion ?
10. What is tunnel ?

Part B

(5 × 5 = 25)

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

11. (a) Define Springs and explain the geological conditions favouring development of springs.

(Or)

- (b) Briefly explain about the Vertical Distribution and occurrence of Groundwater.

12. (a) Briefly explain about the different types of openings.

(Or)

(b) Describe Specific Yield and Specific Retention.

13. (a) Discuss briefly the Groundwater conditions in coastal Tamilnadu.

(Or)

(b) Explain in detail the Groundwater Natural Recharge.

14. (a) Discuss the role of geology in Civil Engineering.

(Or)

(b) Explain in detail about the properties of building stones.

15. (a) Briefly discuss the Geological investigations and problems during the tunneling.

(Or)

- (b) Explain about the prevention measures of coastal erosion.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on Hydrologic Cycle.
17. Describe in detail about the origin and occurrence of groundwater.
18. Explain in detail about the chemical properties of groundwater and give the drinking water standards.
19. Explain in detail about the Landslides and their causes.
20. Write an essay about the types of Dams and Geological investigations of Dam Sites.

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BGE6C1

B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Geology

ECONOMIC GEOLOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Ore with examples.
2. List any four fertilizer minerals with their chemical composition.
3. What is meant by gangue minerals ?
4. What is exsolution ?
5. Write a short note on metallic minerals.

6. Define Gemstones.
7. State the uses of zirconium.
8. What are the minerals required for manufacture of glass ?
9. Comment on bituminous coal.
10. Mention the chief properties of petroleum.

Part B

(5 × 5 = 25)

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

11. (a) Point out the differences between Grade and Tenor.

(Or)

- (b) Outline the residual processes of formation of mineral deposits.

12. (a) Write an elaborate note on geothermometry.

(Or)

(b) Give a brief account on Metallogenic epochs.

13. (a) Briefly account on copper distribution in India.

(Or)

(b) Enumerate the mode of occurrence and uses of Manganese.

14. (a) Give a detailed note on distribution of fertilizer minerals in India.

(Or)

(b) Account on building stones and their mode of occurrences in Tamilnadu.

15. (a) Elucidate the varieties of coal.

(Or)

- (b) Write a detailed note on limestone deposits in Tamilnadu.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Give a detailed account on the process of Contact Metasomatism.
17. Describe Bateman's classification of ore deposits.
18. Explain the chemical composition, mode of occurrence, uses and distribution of iron ores in India.
19. Discuss the mode of occurrence and distribution of ceramic minerals in India. Add a note on ceramic industries in Tamilnadu.
20. Give an account on origin and occurrence of petroleum. Add a detailed note on Petroleum basins of South India.

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BGE6C2

B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Geology

STRUCTURAL GEOLOGY

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Section A

(10 × 2 = 20)

Answer **all** questions.

1. What are the methods of representing relief features ?
2. Define Vertical thickness.
3. Define Strain.
4. What is Deformation ?

5. Define Fault.
6. What are the criteria for recognition of folds ?
7. Define Dip.
8. Define Nappe.
9. What are Unconformities ?
10. Define an off lap.

Section B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' or 'b'.

11. (a) Explain the strike and dip of the formation.

(Or)

(b) What is relationship between true and apparent dip ?

12. (a) Describe three stages of rock deformation.

(Or)

(b) Explain the Geometry of folds.

13. (a) Explain methods of recognition of folds in the field.

(Or)

(b) What are the different genetic classification of faults ?

14. (a) Distinguish between Joints and Veins. Describe their analysis in tectonic studies.

(Or)

(b) Write a brief notes on :

(i) Klippe.

(ii) Fenstar.

15. (a) What are the criteria to distinguish unconformities from faults ?

(Or)

(b) How clinometer is useful for field studies ?

Section C

(3 × 10 = 30)

Answer any **three** questions.

16. What are the methods of representing physiographic features in a topographic maps, explain them in detail ?

17. Write in detail about the classification of Folds.

18. Explain in detail on Geometry of faults.

19. Explain the Genetic classification of joints.

20. What are the major criteria to recognise overlap and offlap?

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AF-3492

BGEE3A

B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Geology

**Elective—PHOTO GEOLOGY, REMOTE SENSING
GIS AND MINING GEOLOGY**

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Define Remote sensing.
2. Define EMR.
3. What is an Aerial Photograph ?
4. Define Photogeology
5. Explain the basic recognition elements.

6. Define Mosaics.
7. What is Geographic co-ordinate system ?
8. Define GIS.
9. Define Adit.
10. Define Strategic Minerals.

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' or 'b'.

11. (a) Write an essay on the EMR with neat sketch.

(Or)

- (b) Write an account of the various types of stereoscope.

12. (a) Explain sensors and their types.

(Or)

(b) Write an account of the various types of films and filters.

13. (a) Explain briefly fundamentals of air photo interpretation.

(Or)

(b) Describe the interpretation of photo elements.

14. (a) What are basic principles of GIS ?

(Or)

(b) What are the spatial data concepts ?

15. (a) Outline the problems encountered during mining operations.

(Or)

- (b) Give a brief note on conservation of minerals.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an account of various types of aerial photographs.
17. Brief account on application of remote sensing and aerial photography in geological studies.
18. What are the Raster and Vector format of Topology.
19. Write in detail about the National mineral policy.
20. Write an essay on Open cast mining, with special reference to Neyveli Lignite mine.

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BGEE3B

B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Geology

Elective—GEOEXPLORATION

(CBCS—2008 onwards)

Time : 3 Hours

Maximum : 75 Marks

Draw diagrams wherever necessary

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Percussion drill.
2. What are ores ?
3. Define Resistivity.
4. Name two instruments used to measure the Magnetic field of the earth.

5. What is gravitational acceleration ?
6. Define Dinoseis technique.
7. Define Magnetic suceptability.
8. What is radioactive decay ?
9. What are S-Block elements ? Name any two.
10. Define Geochemical anomaly.

Part B

(5 × 5 = 25)

Answer **all** questions by choosing **either** 'a' **or** 'b'..

11. (a) Write about the use of toposheets in geological exploration.

(Or)

(b) Explain Pitting and Trenching of ore body.

12. (a) Write the principles of Wenner and Schlumberger configuration in Resistivity methods.

(Or)

(b) Explain the IP methods.

13. (a) Describe principles and working of the Worden gravimeter.

(Or)

(b) Write the working and principles of Geophones in seismic prospecting.

14. (a) Briefly describe the working and principles of Scintillation counter.

(Or)

(b) Write a brief note on Magnetic susceptibility of rocks and minerals.

15. (a) Give a brief note on Primary dispersion of elements.

(Or)

- (b) Write a brief note on the steps involved in identifying ore deposits by adopting Geochemical method.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Describe about the drilling and its types.
17. Write about the different types of Geophysical methods and add a detailed note on its limitations in identifying ore bodies.
18. Discuss about the working and principles of Gravity instruments.

19. Give a detailed account on the Paleomagnetism and add a note on the Magnetic principles of earth.

20. Enumerate the application of Geochemistry in Mineral exploration.

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