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Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester Integrated M.Sc Geology Degree Examination, April 2025

**GLO6IE01(E01a) -REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEM**

(2020 Admission onwards)

Time: 2 hours

Max. Marks: 60

*(Draw neat sketches, wherever necessary)*

**PART – A**

Answer *all* questions.

Each question carries **Two** marks.

**Ceiling -20 Marks**

1. Define Remote sensing.
2. What is called datum in GIS?
3. Give a short note on how satellite platforms used for remote sensing.
4. What is satellite orbits?
5. Briefly write about different type of resolution in remote sensing.
6. Define geographic information system.
7. Comment on the interaction of electromagnetic radiation with atmosphere.
8. Give an account on different type of sensors used in remote sensing.
9. Write a short on the historical development of remote sensing.
10. Discuss different type of remote sensing.
11. Write a short note on map projection.
12. What is spatial and non-spatial data?

**PART – B**

Answer *all* questions.

Each question carries **Five** marks.

**Ceiling -30 Marks**

13. Discuss about different types of coordinate system.
14. Give a detailed account on the application of GIS.
15. Write in detail about the working of GPS.
16. Discuss in detail about the data management system.
17. Elaborate the various components of GIS.
18. Give a detail note on vector and raster data.
19. How different thematic maps are using in GIS?

**PART - C**

Answer any *one* question.

Each question carries **Ten** marks.

20. Explain in detail about different types of map projections.
21. What do you mean by topology? Give all spatial relationship between two region and comment on the rules of topological consistency.

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester Integrated M.Sc Geology Degree Examination, April 2025

**GLO6IB11- STRATIGRAPHY AND INDIAN GEOLOGY**

(2020 Admission onwards)

Time: 2 hours

Max. Marks: 60

*(Draw neat sketches, wherever necessary)*

**PART – A**

Answer *all* questions.

Each question carries **Two** marks.

**Ceiling -20 Marks**

1. How unconformity is different from hiatus?
2. Comment on the principle of Uniformitarianism.
3. How index fossil is useful for geologist?
4. What is chronostratigraphy?
5. Differentiate between mobile belt and craton.
6. Write down about Lilang Group.
7. What is flysch?
8. Differentiate between intratrappean beds and intertrappean beds.
9. Describe about Sakoli Group.
10. Define diastem.
11. Give a short note on Walther's Law.
12. Name lower and upper Purana Groups of South India.

**PART – B**

Answer *all* questions.

Each question carries **Five** marks.

**Ceiling -30 Marks**

13. Briefly explain about the different types of unconformities.
14. Write a short note on the principles of stratigraphy.
15. Explain different type of Biozone with neat diagram.
16. Describe the stratigraphy of Gondwana supergroup.
17. Give a detail note on Aravalli supergroup.
18. Elaborate the stratigraphic units of Siwalik Group with major fossil assemblage.
19. Discuss the stratigraphy and depositional environment of Cretaceous of Trichinopoly.

**PART - C**

Answer any *one* question.

Each question carries **Ten** marks.

20. Describe all stratigraphic units of Kerala in detail.
21. Briefly discuss stratigraphy, lithology, depositional environment and economic importance of Dharwar Supergroup.

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

**Sixth Semester Integrated M.Sc Geology Degree Examination, April 2025**

**GLO6IB10 – PALAEOLOGY**

(2020 Admission onwards)

Time: 2 hours

Max. Marks: 60

*(Draw neat sketches, wherever necessary)*

**PART – A**

Answer *all* questions.

Each question carries **Two** marks.

**Ceiling -20 Marks**

1. What do you mean by Pseudopodia?
2. Explain brachial skeleton?
3. What is meant by diploblastic grade of animals?
4. How can you recognize the regular and irregular Echinodermata?
5. Describe the key feature of Ptilophylum fossil?
6. How do glossopteris differ from gangamopteris?
7. Differentiate Corallite and Corallum
8. What are the conditions that are favourable for fossil preservation?
9. Define the following (i) *Sphaerocone* (ii) *Cadicone* (iii) *Oxycone* (iv) *Platycone*.
10. Write about cheeks of trilobites.
11. What are the distinguishing properties of Phylum Mollusca?
12. Write about pygidium.

**PART – B**

Answer *all* questions.

Each question carries **Five** marks.

**Ceiling -30 Marks**

13. Explain the morphology of class Graptozoa
14. Explain the facial suture in Trilobita with neat sketches.
15. Enumerate some important vertebrates species discovered from Siwalik deposit?
16. Give an explanatory note on Rugosa Corals and its morphology. Add a note on Rugosa coral forms in terms of epical angle.
17. Write a note on the following: (a). Glossopteris (b). Ptilophyllum (c). Sigillaria (d). Calamites
18. How the pelecypods are differing from the brachiopods?
19. Give a brief account on classification of class Trilobita

**PART - C**

Answer any *one* question.

Each question carries **Ten** marks.

20. Explain the general morphology, classification and geological history of Phylum Brachiopoda.
21. Give an account on Phylum Mollusca. Write an essay on morphology, classification and geological history of Class Pelecypoda.

**1 x 10 = 10 Marks**

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

**Sixth Semester Integrated M.Sc Geology Degree Examination, April 2025**

**GLO6IB09 - ECONOMIC GEOLOGY**

(2020 Admission onwards)

Time: 2 hours

Max. Marks: 60

*(Draw neat sketches, wherever necessary)*

**PART – A**

Answer *all* questions.

Each question carries **Two** mark.

**Ceiling -20 Marks**

1. What is the tenor of an ore deposit?
2. Write about reservoir and source rocks of oil formation with examples?
3. Brief about manganese nodules and their importance?
4. What are the important deposits formed by metasomatism and brief their formation?
5. What are gossans and their economic importance?
6. What are industrial minerals? Give any two examples with their uses and mode of formation?
7. What are the differences between siderophile and chalcophile elements?
8. What are different types of fissure vein deposits?
9. Name any two aluminium bearing ore minerals with their composition and uses?
10. What are the gemstones found in Kerala and give their mode of occurrence?
11. How the sillimanite group of minerals are formed?
12. Write about residual concentration process?

**PART – B**

Answer *all* questions.

Each question carries **Five** marks.

**Ceiling -30 Marks**

13. Explain the process of mechanical concentration? Brief different types of placer deposits?
14. What is wall rock alteration? Add a note on the factors controlling the wall rock alteration with two examples in detail
15. Explain the identification criteria of cavity filling and replacement deposits?
16. Briefly explain the Bateman's classification of ore formation process?
17. Brief chemical composition, uses, mode of occurrence and distribution of copper ore minerals in India?
18. Shortly explain the oxidation and supergene processes of ore formation?
19. Explain the six factors that control the process of localization of economic minerals?

**PART - C**

Answer any *one* questions.

Each question carries **Ten** marks.

20. Describe mode of formation various magmatic ore forming processes with neat sketches with examples?
21. Write an essay on chemical composition, proximate analysis, classification and theories of origin of coal with their Indian occurrence based on the age?

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