

Reg. No. :

Name :

Ph.D. ENTRANCE EXAMINATION 2023

FACULTY OF SCIENCE

GEOLOGY

Time : 3 Hours

Max. Marks : 100

Instructions :

- 1) Answer **any ten** questions each from Section **A** and Section **B**.
- 2) Each question carries **5** marks.
- 3) No additional Answer sheets will be provided.
- 4) Candidates should clearly indicate the section, Question number in the answer booklet.

Section – A

Research Methodology

Answer any **ten** questions. Each questions carries **5** marks.

1. Define Research problem.
2. How are the topographical data useful for field work?
3. Describe the methods used in rock sampling.
4. What are the importance of literature survey?
5. Discuss the primary and secondary data collection methods.
6. Write note on field survey and list out the essential geological survey materials.
7. How do you collect water sample and analysis?

8. Describe the basic statistical method used for geosciences application.
9. Define the role of GIS and statistical software in geological mapping.
10. Write note on application of Digital library and Database Management System (DBMS).
11. Describe the applications of MS-Office software for data analysis and presentation.
12. Elucidate the applications of remotely sensed data for temporal studies.
13. Discuss the importance of bibliography and citations.
14. How do you write research project proposal?
15. How do you validate your results? Discuss.

(10 × 5 = 50 Marks)

Section – B

Geology

Answer any **ten** questions. Each questions carries **5** marks.

1. Describe the fluvial geomorphic agents and its Landforms.
2. Write note on Intrusive igneous bodies with an illustration.
3. Write an account of morphometric analysis.
4. Discuss in detail about the global warming and its impact on sea level changes.
5. Describe the fold geometry and explain the types of folds.
6. Discuss the principles of remote sensing.
7. Discuss Green House Effect.
8. Describe factors of metamorphism and types of metamorphism.
9. Write about drift theory of the origin of coal seams.

10. List the major iron ore deposits of India with reference to Kerala.
11. Discuss in detail about the different types of geo-botanical indicators.
12. List out the map elements and explain various types of maps.
13. Discuss the composition and structure of the atmosphere.
14. Discuss in detail about the important petroliferous basins in India.
15. Discuss the groundwater provenance of India and groundwater condition in Kerala.

————— **(10 × 5 = 50 Marks)**