

Reg. No. :

Name :

Ph.D. ENTRANCE EXAMINATION, NOVEMBER 2022

FACULTY OF SCIENCE

GEOLOGY

Time : 3 Hours

Max. Marks : 100

Instructions :

- 1) Answer **any ten** questions each from Section **A** and **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

- I. Answer any **ten** questions. All questions carry equal marks.
 1. Procedures adopted for rock analysis in laboratory.
 2. Structure of a Research Report.
 3. Various funding agencies for geosciences.
 4. Morphometric analysis using remote sensing and GIS.
 5. Computer application for graphical representation of data sets.
 6. Isotope analysis techniques.
 7. Preparation of geological maps and their interpretation.

8. Multivariate statistical methods in geological analysis.
9. Database Management Systems.
10. Emission and absorption Spectroscopy.
11. Methods for rock sampling.
12. Science citation index.
13. Plagiarism and how to avoid.
14. Temperament and qualities of a researcher.
15. Separation and identification of fossils.

(10 × 5 = 50 Marks)

Section – B

Geology

- II. Answer any **ten** questions. All questions carry equal marks.
1. Map projections.
 2. Sedimentary structures.
 3. Geometric analysis of folds.
 4. Plate tectonics and metamorphism.
 5. Optical properties of Amphibole.
 6. Saline water intrusion in coastal aquifers.
 7. Principles and application of electrical logs.

8. Fluid inclusions in mineral exploration.
9. Types of Unconformities.
10. Role of microfossils in petroleum exploration.
11. Geochemical dispersion.
12. Potassium - argon method of dating and their significance.
13. Placer deposits of Kerala.
14. Petrography of coal.
15. Climate change impact on hydrosphere.

(10 × 5 = 50 Marks)
