

Ph.D. GEOLOGY (PHDGY)

Term-End Examination

00691

June, 2019

RGY-102 : RESEARCH TECHNIQUES IN GEOLOGY

Time : 3 hours

Maximum Marks : 100

Note: Answer any *five* questions. All questions carry equal marks.

1. Discuss the basic principles of Atomic Absorption Spectrometer (ASS) technique. Give a neat well-labelled line diagram in support of your answer. 20

2. If you are carrying out field work in an igneous terrain, discuss the geological data you would collect in the field. Add a note on the documentation of this data in the field note book. 20

3. Explain the principle and construction of petrological microscope. Add a note on the importance of petrography. Also draw a well-labelled diagram to show all the parts of petrological microscope. 20

4. Discuss the necessary steps and materials required in planning and preparation for conducting a geological field work. 20
5. Discuss the methods of sample preparation required for hydrogeological investigations. 20
6. Explain how you would apply GIS techniques in your proposed research. 20
7. Write short notes on any **two** of the following : $2 \times 10 = 20$
- (a) Types of Coal
 - (b) Scanning Electron Microscope
 - (c) Grain Size Analysis
 - (d) Micropaleontological Microscope
8. Write short notes on any **two** of the following : $2 \times 10 = 20$
- (a) Heavy Metals
 - (b) Modal Analysis of Sandstone
 - (c) Methods of Sampling
 - (d) TAS Classification
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