



5403

2008 – 2009  
M.Sc. (I SEMESTER) EXAMINATION  
APPLIED GEOLOGY  
MINERALOGY, INSTRUMENTATION AND ANALYTICAL TECHNIQUES  
GLM - 7005  
Maximum Marks: 70  
Duration: Two Hours

Answer all questions.

1. Write short notes on any three of the following: (18)
- (a) Biaxial Indicatrix
  - (b) U-stage
  - (c) Staining of granite in thin section
  - (d) Cathode luminescence

OR

- 1'. Give a detailed account of working principle, parts and applications of Electron Probe Microanalyser (EPMA) in geology. How does it differ from Scanning Electron Microscope (SEM)?
2. Give an account of the olivine group of minerals. (17)

OR

- 2'. Write notes on the following:
- (a) Coordination number and radius ratio.
  - (b) Polymorphism and pseudomorphism
  - (c) Garnets
3. Give an account of any three of the following: (18)
- (a) Native precious metals.
  - (b) Sulfide minerals of copper and Iron
  - (c) Carbonate Minerals
  - (d) P – T stability diagrams
  - (e) Phase rule.
4. What is meant by emission spectrometry? Give an illustrative description of Inductively coupled Plasma Atomic Emission Spectrometer (ICP – AES). (17)
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