

AE-836

M.Sc. (Final)
Term End Examination, 2016-17

GEOLOGY

Paper - II

Geophysical Exploration, Engineering
Geology and Mining Geology

Time : Three Hours] [Maximum Marks : 100
[Minimum Pass Marks : 36

Note : Answer **all** questions. All questions carry equal marks.

Unit-I

1. Write short notes on any **two** of the following :
 - (a) Resistivity method
 - (b) Aeromagnetic surveys and its applications
 - (c) Gravity anomaly maps and their interpretations

OR

(2)

Define 'Geomagnetic field of earth'. Discuss magnetic properties of rocks. Describe working principle of Magnetometer.

Unit-II

2. Write short notes on the following :

- (a) Well Logging techniques
- (b) Principles and application of Electrical Well Logging

OR

Describe Seismic method. Discuss seismic velocity and interpretation of seismic data.

Unit-III

3. Write short notes on any **two** of the following :

- (a) Physical characters of building stones and metals
- (b) Dam foundation, rock problems and safety measures
- (c) Role of Engineering Geology in civil construction

OR

Discuss the Engineering properties of rocks with special reference to tunneling. Describe various types of support.

(3)

Unit-IV

4. Write short notes on any **two** of the following :

- (a) Earthquakes and seismic zones of India
- (b) Geological causes for mishaps and failure of Engineering structure
- (c) Influence of geological conditions on foundation and design of buildings

OR

What is Landslide ? Discuss the causes of Hill-slope instability. How can you prevent it ?

Unit-V

5. Write notes on the following :

- (a) Diamond drilling method and its application in mining
- (b) Ocean bottom mining and mining hazards

OR

What are essential conditions for the mining of underground mineral deposits ? Describe the Room and Pillar method and discuss the advantages and disadvantages.
