

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 0024**

Roll No.

--	--	--	--	--	--	--	--	--	--

**B.Tech.**

(SEM IV) EVEN SEMESTER THEORY EXAMINATION,  
2009-2010

**ENGINEERING GEOLOGY**

Time : 3 Hours

Total Marks : 100

- Note :** (i) Attempt *all* questions.  
(ii) All questions carry *equal* marks.  
(iii) Support the answer with neat sketch.

1. Attempt any two parts of the following : (2x10=20)
- (a) Discuss the relevance of Engineering Geology, Stratigraphy, Mineralogy and Petrology in Civil Engineering.
  - (b) Give a brief account of internal structure of Earth and the materials present in the individual part.
  - (c) What is a Mineral ? Describe Lustre, Hardness, Cleavage and Structure of a mineral.

3. Attempt **any two** parts of the following : (2x10=20)

- (a) Define the Faulting and classify Faults on the basis of apparent movement of disrupted blocks.
- (b) Describe Folding with the help of its parts and classify Folds on the basis of position of axial plane.
- (c) Give a comparative account of Electrical and Seismic methods of geological investigations.

4. Attempt **any two** parts of the following : (2x10=20)

- (a) Discuss the geological considerations and problems encountered for selection of a Dam site.
- (b) Write down the Seismic considerations for designing an engineered construction.
- (c) Give a detailed account of geological considerations of selection of a bridge and associated problems.

2. Attempt **any two** parts of the following : (2x10=20)

- (a) Discuss the important Engineering properties of rocks along with their methods of testing.
- (b) Explain Lamination, Stratification, Cross and Graded Beddings and where do they occur ?
- (c) What is Metamorphism ? Describe various types of Textures and Structures evolved due to Metamorphic processes.

3. Attempt **any two** parts of the following : (2x10=20)

- (a) Define the Faulting and classify Faults on the basis of apparent movement of disrupted blocks.
- (b) Describe Folding with the help of its parts and classify Folds on the basis of position of axial plane.
- (c) Give a comparative account of Electrical and Seismic methods of geological investigations.

4. Attempt **any two** parts of the following : (2x10=20)

- (a) Discuss the geological considerations and problems encountered for selection of a Dam site.
- (b) Write down the Seismic considerations for designing an engineered construction.
- (c) Give a detailed account of geological considerations of select on of a bridge and associated problems.

5. Write short notes on **any two** parts of the following : (2×10=20)

- (a) Aquifers and Artesian Wells
- (b) Seismic Waves and Elastic Rebound Theory
- (c) Tectonic movement and Reservoir Induced Seismicity.

- o O o -