

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

PAPER ID : 0024

Roll No.

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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)
- Discuss the relevance of Engineering Geology, Stratigraphy, Mineralogy and Petrology in Civil Engineering.
 - Give a brief account of internal structure of Earth and the materials present in the individual part.
 - What is a Mineral ? Describe Lustre, Hardness, Cleavage and Structure of a mineral.

(a) Discuss the properties of rocks along with their methods

of recent

and Gradual denudation and their effects

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 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)

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

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5. Write short notes on any two parts of the following : (2x10=20)

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

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