

Code No : V3104/R07

Set No: 1

III B.Tech I Semester Regular & Supplementary Examinations, November 2011

**ENGINEERING GEOLOGY**

(Civil Engineering)

**Time: 3 Hours**

**Max Marks: 80**

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain the process of weathering of Rocks. What are the influencing factors due to Rock weathering give their importance in civil engineering. (8+8)
2. Write the physical properties, chemical composition and uses of following minerals.  
a) QUARTZ    b) GYPSUM    c) HEMATITE    d) CHROMITE (4x4)
3. Describe the mechanism of metamorphism, types of metamorphism and structures of metamorphic Rocks. (6+6+4)
4. What are the parts of FOLDS? Give their classification and types of Folds with sketches. (5+11)
5. Explain in details of geological, geophysical, hydrological investigations for Groundwater exploration. (6+6+5)
6. What are the kinds of geophysical methods of Investigation classify it. (16)
7. Determine the influences of geological structures for construction of a Dam. With sketches. (10+6)
8. Explain the following  
a) Purposes of Tunneling  
b) Lining of Tunnels  
c) Over break (6+6+4)

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Set No: 2

III B.Tech I Semester Regular & Supplementary Examinations, November 2011

**ENGINEERING GEOLOGY**

(Civil Engineering)

**Time: 3 Hours**

**Max Marks: 80**

Answer any FIVE Questions  
All Questions carry equal marks

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1. What are the geological agents? Explain their types & role of in moulding the surface of the earth. (5+11)
2. Write the physical properties, chemical composition & uses of following minerals.  
a) MICROCLANE FELDSPAR b) AMETHYST c) GARNET  
d) GRAPHITE (4x4)
3. Distinguish between the following:  
a) Granite, Biotite- Granite gneiss, Quartzite  
b) Shale, Slate, Schist  
c) Marble, Limestone, Sandstone (6+6+5)
4. What are the parts of FAULTS? Classifies the types of Faults with sketches (4+8+4)
5. Explain the importance, classification and effects of Landslides. Give a brief note preventive measure for landslides. (2+4+4+6)
6. Determine the principle, parameters, methods and Applications of gravity methods and magnetic method. (2+2+2+5+5)
7. Describe the details of capacity, Effect of evaporation & water tightness and influence factors for geological considerations for successful reservoirs.(2+2+12)
8. Explain the importance of Rock types, influence of groundwater conditions for successful tunneling. (16)

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**Set No: 3**

III B.Tech I Semester Regular & Supplementary Examinations, November 2011

**ENGINEERING GEOLOGY**

(Civil Engineering)

**Time: 3 Hours**

**Max Marks: 80**

Answer any FIVE Questions  
All Questions carry equal marks

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1. What are the Branches of geology? Explain their relevance in civil engineering (4+12)
2. Briefly give the different physical properties in mineral identification. (16)
3. Write the following
  - a) Forms of Igneous rocks
  - b) Classification of igneous (8+8)
4. Distinguish between the structures of Fractures, Joints, Faults, Unconformity. Give their importance in Role of Civil engineering. (4x4)
5. Write the following
  - a) Define the terms Porosity, Permeability. Give their classification based on Rocks.
  - b) What are the controls on Groundwater movement with respect to Geology? (8+8)
6. What are the possible sources of Groundwater pollution? (16)
7. Explain the purposes, topographical, lithological considerations in the selection of a site for successful Dam construction. (4+6+6)
8. Explain in details of influence and importance of geological structures for successful tunneling. (16)

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**Set No: 4**

III B.Tech I Semester Regular & Supplementary Examinations, November 2011

**ENGINEERING GEOLOGY**

(Civil Engineering)

**Time: 3 Hours**

**Max Marks: 80**

Answer any FIVE Questions  
All Questions carry equal marks

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1. Define the terms of Geology, Engineering Geology. Give their role of importance of Geology in civil engineering. (2+4+10)
2. What is a mineral? Explain the importance of Rock- forming minerals from the civil engineering point of view. (4+12)
3. Explain the following
  - a) Structures of Igneous Rocks
  - b) Structures of Sedimentary Rock with sketches (8+8)
4. What is unconformity? Write the parts, formation and types of unconformities with sketches and give their importance and recognition in the field of civil engineering (2+2+3+5+4)
5. Explain the causes, classification, waves and effects of earthquakes. Give their preventive measures for construction of Building in earthquakes prone areas. (3+4+4+2+3)
6. What are the factors of influencing Electrical Resistivity, classification, types and uses of profiling of Electrical Resistivity method. (3+3+2+8)
7. Enumerate the causes of silting of Reservoirs. List various measures followed to increase the life of the Reservoir and to prevent to leakage of water. (4+6+6)
8. Describe the importance of geological considerations of lithological, structural and groundwater conditions for successful tunneling. (3+4+4+5)

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