

Code No: R09222503

R09

SET-1

B.Tech II Year - II Semester Examinations, April-May, 2012

MINING GEOLOGY

(Mining Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- - -

1. Give the various geological and engineering properties that are important in rocks for building purposes. Describe some common building stones. [15]
2. Describe the following terms:
 - a) Pegmatite deposits
 - b) Placer deposits
 - c) Hydrothermal deposits[5+5+5]
3. Write brief notes on:
 - a) Aluminium deposits of India
 - b) Manganese deposits of India
 - c) Coal deposits of India[5+5+5]
4. Write brief notes on:
 - a) List the various geophysical methods of prospecting the electrical methods in detail.
 - b) Describe the specific methods of geophysical exploration used in ground water survey. [8+7]
5. Write brief notes on:
 - a) Coal reserve estimation
 - b) Gas reserve estimation[8+7]
6. Explain brief notes on:
 - a) Write a short account of the important of geology studies in solving problems relating to landslides.
 - b) Write a short account of the role of geology in determining the stability of hill slopes.Draw neat illustrative sketches making suitable assumptions. [8+7]
7. What are tunnels? How are they used? Enumerate and discuss the geological conditions, which govern the prevailing tunneling condition and determine the safety and stability of tunnels. Draw neat illustrative sketches making suitable assumptions. [15]
8. Explain borehole drilling methods:
 - a) Percussive drilling
 - b) Rotary drilling
 - c) Diamond drilling[5+5+5]

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SET-2

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MINING GEOLOGY

(Mining Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- - -

1. What are the engineering properties of rocks? Explain crushing strength. And shear strength. With example of rocks. [15]
2. Write notes on:
 - a) What do you understand by the term “economic mineral deposits”?
 - b) Explain briefly formation of economic mineral deposits of igneous origin. [8+7]
3. Write brief notes on:
 - a) What is petroleum? Where petroleum does occurs in India? Write about the origin of petroleum.
 - b) What is coal? Where coal does occurs in India? Write about the origin of coal. [7+8]
4. Write brief notes on:
 - a) Seismic methods.
 - b) Gravity method.
 - c) Electrical resistivity method. [5+5+5]
5. What is reserves estimation? Describe the probable reserves, proved reserves and inventory reserves. Explain with example. [15]
6. Write notes on Landslides:
 - a) Soil slip
 - b) Earth slide
 - c) Rock slipDraw neat illustrative sketches making suitable assumptions. [5+5+5]
7. Describe the following terms:
 - a) Traffic tunnels
 - b) The Hydropower tunnel
 - c) The public utility tunnels
 - d) Tunnel surveyingDraw neat illustrative sketches making suitable assumptions. [3+3+3+6]
8. Write detail notes on:
 - a) Explain drilling in mineral exploration.
 - b) Explain drilling in soft rocks.
 - c) Explain drilling in hard rocks. [5+5+5]

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SET-3

B.Tech II Year - II Semester Examinations, April-May, 2012

MINING GEOLOGY

(Mining Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- - -

1. What is rock? Explain physical properties of rocks. What type rocks are uses in building construction? Write Engineering uses of important rocks. [15]
2. Write notes on:
 - a) Explain hydrothermal deposits. How it formed in nature?
 - b) Explain sedimentation deposits. How it formed in nature?
 - c) Explain magmatic deposits. How it formed in nature? [5+5+5]
3. Write explanatory notes on:
 - a) Gold deposits of India
 - b) Mica deposits of India
 - c) Petroleum deposits of India [5+5+5]
4. Write notes on:
 - a) Discuss the objects and general methods of geological investigations for major engineering projects.
 - b) Explain the scheme of exploration of oil and gas deposits by seismic method. [7+8]
5. Write notes on:
 - a) Type of Reserves estimation
 - b) Cutoff grade
 - c) Tonnage [9+3+3]
6. Discuss rocks and soil slopes? Write causes and effects of slope failures. Draw neat illustrative sketches making suitable assumptions. [15]
7. What is tunnel? Describe the various geological problems met during the construction of tunnel both in the soft ground and in the hard rock. Draw neat illustrative sketches making suitable assumptions. [15]
8. What is use of drilling in mineral exploration? Explain drilling in soft rock formation and hard rock formation. [15]

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SET-4

B.Tech II Year - II Semester Examinations, April-May, 2012

MINING GEOLOGY

(Mining Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

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1. What are the Engineering Properties of rocks? Explain Physical and Mechanical properties of rocks? Write engineering uses of important rocks. [15]
2. Write notes on:
 - a) Definition of ore. Explain processes of ore deposits.
 - i) Hydrothermal deposits,
 - ii) Beach sand deposits.
 - b) Write an account of the mode of formation of magmatic ore deposits, with suitable Indian examples. [10+5]
3. Write notes on:
 - a) What is petroleum? Where petroleum does occurs in India? Write about the origin of petroleum.
 - b) What is coal? Where coal does occurs in India? Write about the origin of coal.
 - c) What is iron? Where iron does occurs in India? Write about the origin of iron. [5+5+5]
4. Write note on:
 - a) Give a brief outline of the geological survey of mineral exploration.
 - b) Describe the specific methods of geophysical exploration used in ground water survey.
 - c) Explain the scheme of exploration of oil and gas deposits by seismic method. [5+5+5]
5. Write brief notes on:
 - a) Coal reserve estimation
 - b) Gas reserve estimation. [8+7]
6. Write notes on:
 - a) Write a short account of the important of geology studies in solving problems relating to landslides.
 - b) Write a short account of the role of geology in determining the stability of hill slopes. [8+7]
7. Write notes on:
 - a) Discuss critically role of geological conditions that influence the design, cost and stability of a traffic tunnel and hydropower tunnels.
 - b) Discuss the geological conditions, which contribute towards the successful construction and ultimate stability of tunnels. [8+7]
8. Write types of drilling. What is use of drilling in mineral exploration? Explain rotary drilling and diamond drilling. [15]
