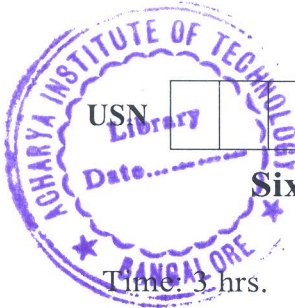


CBCS SCHEME

15MN61



Sixth Semester B.E. Degree Examination, June/July 2019 Surface Mining

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain the General considerations for the Applicability of opencast mining. (08 Marks)
b. Define a Boxcut? Explain the different methods of opening a boxcut. (08 Marks)

OR

- 2 a. List the advantages, disadvantages of open cast mining over underground mining. (06 Marks)
b. Explain briefly methods for selecting site for Boxcut. (10 Marks)

Module-2

- 3 a. Explain the optimum Dimensions of open pit mines. With reference to DGMS guidelines. (06 Marks)
b. Explain the various factors affecting the stability of the slope. (10 Marks)

OR

- 4 a. Explain the Removal and Disposal of overburden. (06 Marks)
b. Explain the Various types of slope failures with a sketch. (10 Marks)

Module-3

- 5 a. List the major types of drilling machines used in surface mining. (04 Marks)
b. Explain the Mechanics of blasting and principles of Rock fragmentation. (12 Marks)

OR

- 6 a. Explain the Design of blasting with special reference to heavy blasting and explain the various patterns of initiation system. (10 Marks)
b. Explain smooth blasting and its advantages. (06 Marks)

Module-4

- 7 a. With a neat sketch explain the construction and working of Bucket wheel excavator and label their parts. (12 Marks)
b. List the Different types of shovels used in an open cast mine with their relative advantages and disadvantages. (04 Marks)

OR

- 8 a. With a neat labelled diagram, explain a Continuous Surface Miner (C.S.M) and explain the various kinds of mining methods that can be adopted with it. (10 Marks)
b. Write a short note on front end Loader/. (06 Marks)

Module-5

- 9 a. With a neat labelled diagram, explain with working characteristics of on shovel Dumper combination and selection criteria of equipment and advantages. (11 Marks)
b. Explain briefly the input crushers used in mining. (05 Marks)

OR

- 10 a. List the different kinds of High Angle Conveyor (HAC)? Explain the application of HAC in Deep open pit mines. (10 Marks)
b. Explain the advantages of High Angle Conveyor (HAC) over Dumper transportation in open pit. (06 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.