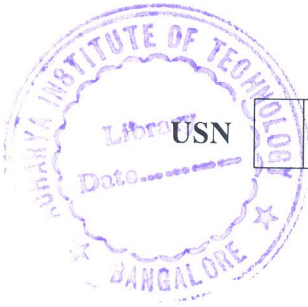


CBCS SCHEME



15MN35

Third Semester B.E. Degree Examination, June/July 2019 Elements of Mining Engineering

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 significance to mining industry in national economy. (08 Marks)
b. Explain the geo-technical investigation for a mining industry. (08 Marks)

OR

- 2 a. Explain the Adits with their application, conditions, merits and demerits. (08 Marks)
b. Explain the vertical shaft with their application, condition, merits and demerits. (08 Marks)

Module-2

- 3 a. Explain the unit operation in shaft sinking by conventional method. (08 Marks)
b. Explain the construction of permanent lining for a shaft sinking project. (08 Marks)

OR

- 4 a. Explain the piling method of shaft sinking. (08 Marks)
b. Explain the drop raise method. (08 Marks)

Module-3

- 5 a. Explain the drivages of cross cuts by Burn cut pattern and calculate the OMS of the operation. (10 Marks)
b. Explain the conventional method of driving the raises. (06 Marks)

OR

- 6 a. Explain the drivages of drift by wedge cut pattern and calculate the OMS of the operation. (10 Marks)
b. Explain in brief the arrangement for ventilation, support, lighting, transportation and drainage system. (06 Marks)

Module-4

- 7 a. Write short notes on :
(i) Prop support
(ii) Hydraulic support (08 Marks)
b. Write short notes on :
(i) Yielding supports
(ii) Chock support (08 Marks)

OR

- 8 a. Explain roof stitching with their application and limitations with their merits and demerits. (08 Marks)
b. Explain roof bolting with their applications and limitations with their merits and demerits. (08 Marks)

Module-5

- 9 a. Explain the conventional method of driving a tunnel. (06 Marks)
b. Explain the construction and working principle of Tunnel boring machine. (10 Marks)

OR

- 10 a. Write short note on:
(i) Tunnel boring machine (08 Marks)
(ii) Drilling and blasting in tunnels (08 Marks)
b. Explain the preliminary investigation to be made for a tunnel project. (08 Marks)
