

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

Paper ID : 2289940

Roll No.

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## B.TECH

Regular Theory Examination (Odd Sem -VII), 2016 - 17

## TUNNEL ENGINEERING

*Time : 3 Hours*

*Max. Marks : 100*

**Note:** Attempt all the Questions.

### SECTION - I

**1. Attempt all parts:** (10×2=20)

- a) What is tunnel? Why we are use?
- b) What do you know by open cut?
- c) Write short note shaft?
- d) What are hauling of muck?
- e) What are size and shape of tunnel?
- f) Define timbering in shaft?
- g) Define the drilling of tunnel?
- h) Give some uses of tunnel?

- i) What is the T.B.M?
- j) Explain the bore hole?

### SECTION - II

2. Attempt any five parts: (5×10=50)

- a) Sketch the different types of drilling pattern?
- b) Name the different types of drilling equipment used for boring holes in rock?
- c) Explain the drill bits and sketches?
- d) Compare machine mucking with hand mucking.
- e) Explain the dust control system used in construction of tunnel?
- f) What is method of timbering in shaft?
- g) Describe the work of jack bammer with neat sketch?
- h) Explain the drilling and blasting in tunnel?

### SECTION - III

Attempt any two parts: (2×15=30)

- 3. What is the geological investigation in tunnel? Describe with full detail?

- 4. What do you mean by the shape and size of tunnel explain with neat sketch of shape of tunnel generally use.
- 5. Why ventilation system is necessary for tunnel during its construction?