

Total No. of Questions : 12]

SEAT No. :

P1685

[Total No. of Pages : 3

[5460]-502

T.E. (Civil)

**INFRASTRUCTURE ENGINEERING &
CONSTRUCTION TECHNIQUE
(2015 Pattern) (Semester - I)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer any one from questions 1 or 2, 3 or 4, 5 or 6, 7 or 8, 9 or 10, 11 or 12.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data if necessary.

Q1) a) What is need of mechanization in construction industry with demerits of mechanization? [6]

b) Explain with neat sketch coning of wheel. [5]

OR

Q2) a) Explain in brief the role of transportation in infrastructure engineering. [6]

b) Define following terms: Turnout, Stock rails, Switch. [5]

Q3) a) With an aid of a neat sketch, explain points and crossings. [5]

b) Explain in brief the dredging systems and what is suction method of dredging? [6]

OR

Q4) a) Explain with neat diagrams dewatering systems used in construction. [5]

b) Define permanent way and state its components & explain any two in brief. [6]

P.T.O.

- Q5)** a) State the various methods of tunneling in Soft ground. Explain Needle Beam Method with neat sketch. [6]
b) Write a note on Micro Tunneling. [6]

OR

- Q6)** a) Give the names of types and methods of Tunnel Ventilation. Explain any one in detail. [6]
b) Explain the Tunnel Boring Machine (TBM) Technique in detail. [6]

- Q7)** a) With labeled sketch, Define the following terms. [6]
i) Shaft
ii) Adit
iii) Portal
iv) Pilot Tunnel
b) List out the various components of Port. Explain any two in detail. [6]

OR

- Q8)** a) Define the term Breakwater. Explain necessity in detail. [6]
b) Write a short note on Wet Dock. [6]

- Q9)** a) Discuss the site selection criteria for harbors. [6]
b) Define the term Port. Bring out the difference between Port and Harbor in detail. [6]

OR

- Q10)** a) Define the following terms (any four) [6]
i) Fenders
ii) Dolphins
iii) Quay
iv) Bulkhead
v) Wharves
vi) Jetty
b) Explain the Preventive Maintenance of Equipment. [6]

- Q11)** a) What is Depreciation? Explain any one method of Depreciation. [6]
b) Write a short note on : Operating Cost of Equipment. [6]

OR

- Q12)** a) Discuss in brief various factors affecting selection of equipment for a project. [6]
b) Write a short note on : [6]
i) Economic life of Equipment.
ii) Dumpers.

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