P3239

[5353] - 102
T.E. (Civil) (Semester - I)
INFRASTRUCTURE ENGINEERING
(2012 Pattern)

Time :2½ hours]   *[Max. Marks :70*

Instructions to the candidates:

1) Answer Q. No. 1 or Q. No. 2, Q. No. 3 or Q.No. 4, Q.No. 5 or Q.No.6, Q.No. 7 or Q. No.8, Q.No. 9 or Q.No.10, Q.11 or Q.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) Discuss in detail importance of construction sector in any country's economic development, with the help of example   **[6]**

OR

Q2) Discuss the provision made for highways with reference to 12th five year plan.**[6]**

Q3) Write short note on :   **[8]**

a)   Railway as a mode of land transport

b)   Minimum depth of ballast cushion

OR

Q4) a)   Define gauge of a railway track .State different gauges in India   **[4]**

b)   What are the function of points & crossing   **[4]**

Q5) What are the various applications of dredging   **[6]**

OR

Q6) Explain various types of hoisting equipment required in construction project.**[6]**

P.T.O.

Q7) a) Differentiate between open cut & Tunnel [6]

b) Write short note on : Types of TBM [6]

c) Discuss the advantages of trenchless technology [4]

OR

Q8) a) Explain in detail NATM construction technique [6]

b) What is mucking. Explain any one methods of mucking [6]

c) Write short note on : Micro Tunneling [4]

Q9) a) What are the factors to be considered while selecting a site for a harbor [6]

b) Explain in brief following: [6]
   i) fenders
   ii) dolphins

c) Explain in brief merits & demerits of water transportation [4]

OR

Q10) a) Discuss various factors to be considered in design of a breakwater [6]

b) Explain in brief classification of harbor based upon protection needed [6]

c) Write short note on : Jetty [4]

Q11) a) Differentiate between Rope operated & Hydraulic operated shovel [6]

b) Write short notes on: [12]
   i) Dragline
   ii) Depreciation
   iii) Repair cost

OR

Q12) a) Construction machinery Cost Rs.11 Crores.The salvage value of the same is 11 %.Its useful life is 12 years. Estimate the depreciation of the equipment using following methods. [6]
   i) Straight line method
   ii) Double Declining balance method

b) Write short note on: [12]
   i) Shovel   ii) Scraper
   iii) Labour cost

❈ ❈ ❈