

Total No. of Questions : 12]

SEAT No. :

P2391

[Total No. of Pages : 2

[5253] - 102
T.E. (Civil)
Infrastructure Engineering
(2012 Pattern) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10, Q11 or Q12.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data if necessary.

Q1) Comment on provisions made for infrastructure of energy and power sector with reference to five year plan. [6]

OR

Q2) Explain the necessity of PPP [6]

Q3) a) State the types of failure of rail. [4]

b) State the function of sleepers. [4]

OR

Q4) a) What are elastic fastenings? What is their necessity of importance. [4]

b) State the comparison between steel sleepers and prestressed concrete sleepers. [4]

Q5) Write short note on: Vacuum dewatering system. [6]

OR

Q6) Enlist methods of dredging and explain any one type of dredger. [6]

Q7) a) State various factors which determines size of tunnel. [6]

b) Explain in brief earth pressure balance method of tunneling. [6]

c) Explain the needle beam method of tunneling in soft soil. [4]

OR

Q8) a) Discuss the safety precautions should be taken in tunneling work. [6]

b) What is mean by the following term in tunneling? i) Mucking ii) Portal
iii) Twin tunnel. [6]

c) Explain in detail pilot tunnel. [4]

P.T.O.

- Q9)** a) Define port. State the various requirements of ports. [6]
b) Write short note on: [6]
i) wharves
ii) dolphins
c) Define dock Differentiate between wet & dry dock. [4]

OR

- Q10)** a) Write short note on: [6]
i) Military harbours
ii) Commercial harbours
b) Explain with neat sketch following [6]
i) Tetrapod
ii) Fenders
iii) Jetties
c) Enlist various factors to be considered in design of breakwater. [4]

- Q11)** a) A construction equipment on a work site costs Rs.5,00,000 and has expected life of 5 years and salvage value of Rs.50,000 at the end of useful life .Calculate yearly depreciation of the machine using. [6]
i) straight line method
ii) sum of years method.
b) Enlist various earth moving equipments with their suitability as per type of work [6]
c) Write short note on repair cost and investment cost. [6]

OR

- Q12)** a) What is mean by depreciation of equipment? State the various methods of depreciation and explain any one in brief. Explain any one method of depreciation. [6]
b) What are the types of scraper? Explain the working of scraper. [6]
c) Discuss in detail classification of earth moving equipments. [6]

