

**B.Tech. Civil (Construction Management) /
B.Tech. Civil (Water Resources Engineering)**

Term-End Examination

December, 2016

00052

ET-524(B) : CONSTRUCTION MANAGEMENT - I

Time : 3 hours

Maximum Marks : 70

Note : *Question no. 1 is compulsory. Attempt any four questions from the remaining. Missing data can be suitably assumed.*

1. (a) CADD means
 - (i) Computer And Design and Drawing
 - (ii) Computer Aided Design and Drafting
 - (iii) Computer Aided Design and Drawing

- (b) Average Service Value of illumination generally recommended for drawing board position is
 - (i) 300 Lux
 - (ii) 200 Lux
 - (iii) 50 Lux

- (c) The best suited scheduling technique for the construction project involving activities of repetitive nature is
- (i) CPM
 - (ii) LOB
 - (iii) PERT
- (d) The reason for time-cost overrun in construction projects is
- (i) poor resource mobilisation
 - (ii) lack of funds
 - (iii) Both the above
- (e) Debt-Equity ratio is taken as ideal when the ratio is
- (i) 0.5
 - (ii) 2.0
 - (iii) 1.0
- (f) BOT stands for
- (i) Build-Operate-Transfer
 - (ii) Build-Own-Transfer
 - (iii) Build-Outsource-Transfer
- (g) A critical activity has
- (i) maximum float
 - (ii) minimum float
 - (iii) zero float

7×2=14

2. (a) Draw an isometric view of a building and label it for top view, front view and side view. 7
- (b) Draw the Architectural symbols/conventions for the following : $2+2+1\frac{1}{2}+1\frac{1}{2}=7$
- (i) Four conventional signs of constructional materials
 - (ii) Four symbols for Doors and Windows
 - (iii) Three symbols for Sanitary fittings
 - (iv) Three symbols for Electrical fittings
3. (a) List the factors which influence the selection of an appropriate method of demolition of existing structures. Bring out the differences between Jack-up and Wire-rope pulling demolition. $5+2=7$
- (b) Discuss briefly the different operations involved in site levelling. 7
4. (a) Write briefly on 'Overhead Costs' for the contractor. Define profit margin for a contractor. $6+1=7$
- (b) Write briefly on various methods for preparing approximate estimates. 7

5. (a) Find out the cost of 1 cu.m. of sand at a site which is located in an urban area. Data are as below :

7

- (i) Cost of sand at source = ₹ 20 per cu.m.
- (ii) Hiring charge for Lorry is ₹ 2,000 per day (8 hours)
- (iii) Capacity of Lorry = 4 cu.m. for sand
- (iv) Permissible speed limit = 45 km/hour (outside urban area) and 40 km/hour (inside town area)
- (v) Loading and unloading time = 20 minutes each
- (vi) Loading and unloading charges = ₹ 160 for each operation
- (vii) Lead = 50 km out of which 30 km is outside the town and 20 km inside the town.

Further assume the Lorry makes 2 trips every time to bring 1 Lorry of sand to the site.

(b) Draw a typical brick compound wall with concrete foundation and prepare a standard quantity estimate showing 6 particular items with number L, B, D and Quantity (in a standard format).

7



6. (a) Write short notes on 'Profit and Loss Account' and 'Cash Budget'. 7
- (b) Describe the steps involved in the procedure of forecasting each item of resources. 7
7. (a) What is depreciation ? What are the different methods of charging depreciation ? 7
- (b) Discuss 'Overhead Costs'. Suggest some steps to control the overhead costs. 7
-