B. Tech.

(SEM. VI) EXAMINATION, 2006-07

ESTIMATION & CONSTRUCTION MANAGEMENT

Time : 3 Hours] [Total Marks : 100

Note :
(i) Attempt all questions.
(ii) In case of numerical problems assume data wherever not provided.
(iii) Be precise in your answer.

1 Attempt any four parts of the following: 5x4=20

a) Discuss different types of estimates in short.
b) Write general specifications of 1st class building.
c) Write detailed specifications of 1:4:8 cement concrete in foundation.
d) What are different methods of estimation? Which method you adopt for octagonal bay front building?
e) Calculate the earthwork in excavation of foundation for a room of internal size 5m × 4 m with 300 mm thick walls, the width and depth of the foundation being 700 mm and 900 mm respectively.
f) Enumerate general items of work and mention their units of measurement for building construction.

V-0060] 1 [Contd...
2 Attempt any **four** parts of the following: \[5 \times 4 = 20\]
   a) What do you understand by ‘analysis of rates’. Discuss its importance.
   b) What is a ‘work charged establishment’? Discuss its importance with respect to regular establishment.
   d) Discuss the procedure followed regarding adoption of market rates and cost indices with reference to P.W.D schedule of rates.
   e) Discuss briefly the relative merits and demerits of different methods of valuation.
   f) Work out analysis of rates for 25 mm thick D.P.C

3 Attempt any **two** parts of the following: \[10 \times 2 = 20\]
   a) What are main advantages the network method have over the conventional methods of planning and scheduling?
   b) The network for a certain project is shown in **Fig. 1**. Determine the expected time for each of the path. Which path is critical?

![Fig. 1](attachment:image.png)
c) Explain in brief of the following:
   i) AOA diagram
   ii) Standard deviation
   iii) Most likely time estimate
   iv) Latest allowable occurrence time.

4 Attempt any two parts of the following: \(10 \times 2 = 20\)
   a) Explain the methods of time cost optimization of project network.
   b) What is need of financial management? Describe in short different types of financing.
   c) Explain the following in brief:
      i) Project monitoring
      ii) Time value of money
      iii) Depreciation
      iv) Equivalence concept.

5 Attempt any two parts of the following: \(10 \times 2 = 20\)
   a) What are the different types of engineering contracts? What are the essential documents required in a contract?
   b) Write a suitable tender notice for the construction of an office building for the value of rupees 130 lakhs.
   c) Explain the following:
      i) Earnest money
      ii) Work order
      iii) Evaluation of tender
      iv) Legal aspects of contracts.