2905

Construction Management- I
(1210) (New)

P. Pages : 3

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any two** questions from each unit.
5. Assume suitable data if necessary.
6. Answer to all the sub questions (a, b, c) of the unit should be written in one place.
7. Use of non programmable calculator is allowed.
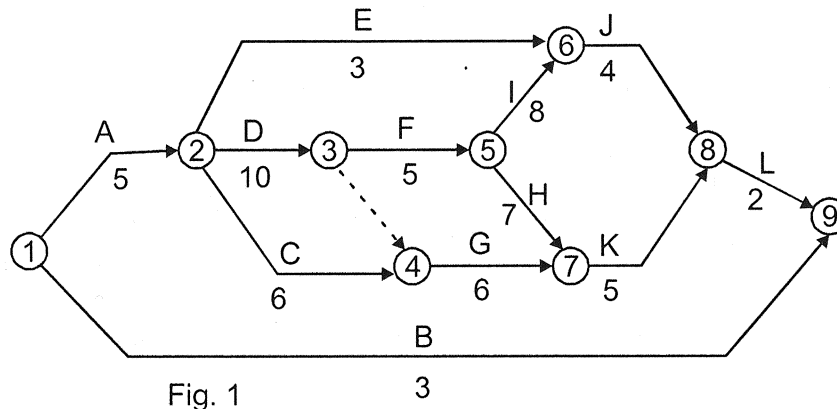8. Draw neat sketches wherever necessary.

UNIT - I

1. a) Describe 'construction team' and role of various persons involved in a project. **10**

   b) What are the types of organisation. Explain the suitability of each type for different construction agencies. **10**

   c) Write short notes on : **10**

      i) Value Engineering.

      ii) Job layout.

UNIT - II

2. a) Differentiate between PERT and CPM. **10**

   b) Explain in relation to network analysis, the critical activity, non-critical activity, total float, Independent float and free float. **10**

c) Find the EST, EFT, LST, LFT and total float for all activities of network as shown in fig. 1. Also indicate the critical path in the network and determine the project completion time.   **10**

Fig. 1

UNIT - III

3. a) Define the terms :   **10**

   i) Direct cost   ii) Indirect cost

   iii) Total cost   iv) Cost slope

   v) Optimum cost.
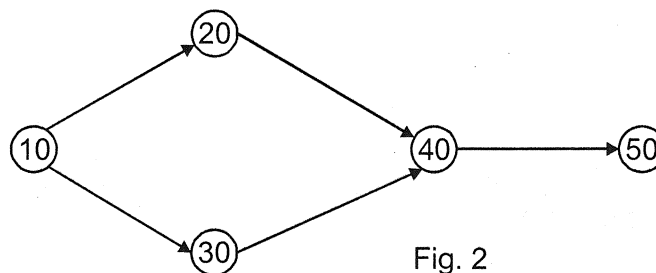
   b) Write short notes on :   **10**

   i) Resource levelling / resource smoothing.

   ii) Line of balance.

   c) For the network shown in fig. 2, determine the optimum cost and optimum time. Data is given in the following table.   **10**

Fig. 2

Activity	Normal		Crash		Cost slope Rs per week
	Time (weeks)	Cost (Rs)	Time (weeks)	Cost (Rs)	
10 - 20	3	12,000	2	16,000	4,000
10 - 30	6	18, 000	3	24,000	2,000
20 - 40	2	20,000	1	23,000	3,000
30 - 40	4	16,000	2	21,000	2,500
40 - 50	5	30,000	4	35,000	5,000

Indirect cost = Rs. 3,000/- per week.

UNIT - IV

4.   a)   Explain law of demand and supply. What are the factors effecting demand & supply.   10

     b)   Enlist various types of Banks. Explain their functions and uses in Indian economy.   10

     c)   Write short notes on :   10

         i)   Importance of Engineering economics.

         ii)   Depreciation of money.

UNIT - V

5.   a)   Enlist various types of pile driving equipments explain any one with sketch.   10

     b)   What are the types of crushers. Explain any one with sketch.   10

     c)   Write short notes on :   10

         i)   Ready mix concrete plant.

         ii)   Concrete pumps.

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