

320655(20)

**B. E. (Sixth Semester) Examination, April-May 2021
(New Scheme)**

(Civil Engg. Branch)

CONSTRUCTION PLANNING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : (i) Answer all questions. Part (a) of each question is compulsory. Attempt any two part from (b), (c) and (d) of each question. In Unit-III attempt any one part from (b) and (c) each carries 14 marks.

(ii) The figures in the right hand margin indicate marks.

Unit-I

1. (a) What do you understand by Job layout? 2
- (b) Write note on : 7.
- (i) Bar chart
- (ii) Milestone chart

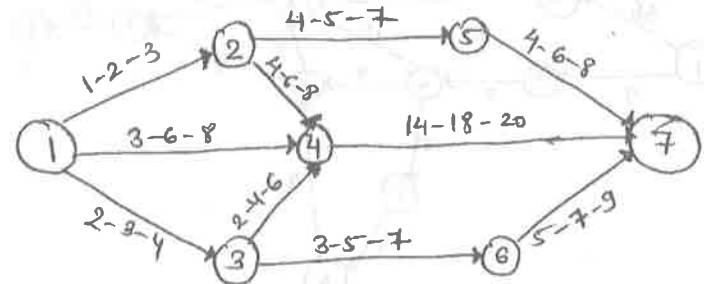
[2]

- (c) What are the objective and function of construction management? 7
- (d) What is feasibility report? Explain in brief. 7

Unit-II

2. (a) Define slack? 2
- (b) What are the three time estimates followed by PERT with its significance? 7
- (c) In a small construction project, there are 6 activities identified from G to L. The following are the relationship between the different activities? Also define dummy? 7
- (i) G is the first activity to be performed
 - (ii) H and I can be done concurrently and must follow G
 - (iii) H must precedes J
 - (iv) K must succeed I, but, it cannot start until H is completed.
 - (v) The last operation L is dependent upon the completion of both J and K
- (d) From the network given below, find the expected time for each path. Also find the critical path as well as the expected time for the project completion. 7

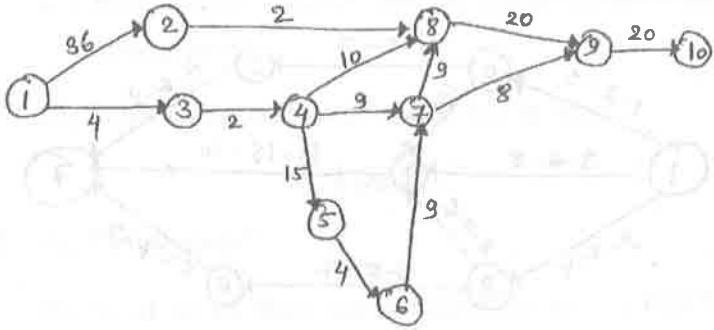
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Unit-III

3. (a) Define Network. 2
- (b) (i) Differentiate between CPM and PERT. 14
- (ii) What is float? What are the different types of float? Explain in brief.
- (c) The network for a certain project is shown below, along with the estimated time of completion of each activity. Compute the activity time, total float, free float and independent float for each activity. Mark the critical path on the network. 14

[4]



Unit-IV

4. (a) What is the objective of cost control? 2
- (b) What is economic analysis of an engineering project.
Discuss with suitable example. 7
- (c) Define resource allocation and write the approaches for resource allocation. Write the factors affecting resource allocation. 7
- (d) Write steps of updating process of any project. 7

Unit-V

5. (a) What is the importance of safety? 2
- (b) Discuss various causes of accidents in construction. 7
- (c) What is the importance of quality control in construction? Enumerate the elements of quality? 7
- (d) Explain the safety benefits to employers, employees and customers. 7