



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 100801

Roll No.

--	--	--	--	--	--	--	--	--	--

B. Tech.

**(SEM. VIII) THEORY EXAMINATION, 2014-15
CONSTRUCTION TECHNOLOGY & MANAGEMENT**

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions. All questions carry equal marks.

1 Attempt any two question parts. $10 \times 2 = 20$

- (a) What are the six main functions of management in undertaking a construction project? Discuss.
- (b) Describe the salient features of various activities and resources involved to be planned for a new project. What are the roles of planning techniques to make the decision for a new project?
- (c) Discuss project cycle and performance objectives. What is the role of architects and other specialist consultants in planning and construction of multi-storied housing project?

2 Attempt any two question parts.

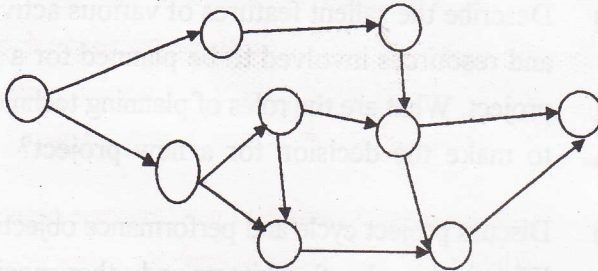
10×2=20

- (a) Draw a bar chart and compute the total duration of the project from the data given below :

Task 1	5 days
Task 2	3 days
Task 3	7 days
Task 4	2 days
Task 5	4 days

Task 1 and 4 will be started together. Task 2 will start after completion of task 3 and task 3 will take place after task 1. Task 5 and 6 will be taken up together but only after completion of task 3.

- (b) State how project controlling and activity inter relationship can be achieved in a modified bar chart. Determine the critical path with the scheduled completion time of 21 days.



- (c) Explain the three time estimates that are used in PERT. How are the expected duration of a project and its standard deviation calculated ?

3 Attempt any two question parts. $10 \times 2 = 20$

- (a) Explain the causes for replacement of assets, in detail with examples.
- (b) Discuss the following methods used in engineering economics analysis for evaluating and comparing alternatives :
 - (1) Present Worth amount
 - (2) Future Worth method
 - (3) Annual Equivalent Method
 - (4) Rate of Return method.
- (c) Bring out the scope of engineering economics with appropriate examples. Explain the process of material selection in new product development.

4 Attempt any two question parts. $10 \times 2 = 20$

- (a) list the information which should customarily appear in an advertisement for tenders.
- (b) What are reciprocal promises in a contract? How their non-fulfillment to breach of contract? Discuss it with a few practical examples.
- (c) What is the purpose of retention money ? When payments may be made at reduced rate? How and by whom are the reduced rates determined.

5 Attempt any two question parts. $10 \times 2 = 20$

- (a) What are the methods of preparing concrete in field?
Also describe the advantages for using concrete mixers.
- (b) Write short notes on following :
- (1) Time and motion study
 - (2) Advantages and disadvantages of owning a construction equipment
 - (3) Use of computer softwares in construction management of large infrastructure projects.
- (c) How the purchase of an equipment is beneficial as compared with renting it?
-