

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII EXAMINATION – SUMMER 2020****Subject Code: 2180611****Date: 29/10/2020****Subject Name: Construction Management****Time: 02.30 pm to 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) Define the Following: (1) Network (2) Work Breakdown Structure (3) Cost Slope	03
(b) What guidelines should be considered while creating a work breakdown structure?	04
(c) Enlist and explain the attributes leading to success and failure of a project.	07
Q.2 (a) Which are the applications of funds flow statements?	03
(b) Discuss ABC analysis for material management.	04
(c) What is the difference between quality assurance & quality control in construction projects?	07
OR	
(c) What is value engineering? Illustrate the application of value engineering for a typical project of your choice.	07
Q.3 (a) Define float. Differentiate free float and total float.	03
(b) How should the Project Manager use Float on the project?	04
(c) A construction company purchases 12,000 bags of cement annually. Each bag of cement costs Rs. 350/- and the cost incurred in procuring each lot is Rs. 200. The cost of carrying is 25 %. What is the most economical order quantity? What is the average inventory level?	07
OR	
Q.3 (a) Differentiate between network diagram and time grid diagram.	03
(b) Discuss with suitable example use of time grid diagram.	04
(c) Differentiate between CPM and PERT.	07

- Q.4** (a) Define: Value, cost and Worth. **03**
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- (b) Explain working capital and its management. **04**
- (c) Illustrate with example the method of Graphical Solution to a Linear Programming Problem. **07**

OR

- Q.4** (a) List the principles of safety in construction industry. **03**
- (b) Explain the accident causation theory. **04**
- (c) The following details are available regarding a project. Determine the critical path, the critical activities and the project completion time. **07**

Activity	Predecessor Activity	Duration (Weeks)
A	-	3
B	A	5
C	A	7
D	B	10
E	C	5
F	D,E	4

- Q.5** (a) What is linear programming? State its uses. **03**
- (b) What are the advantages and limitations in using linear programming in construction management? **04**
- (c) Discuss in brief, the resource allocation. Describe the methods for it. **07**

OR

- Q.5** (a) Explain the term 'Job Layout'. **03**
- (b) What are the factors affecting Job Layout? **04**
- (c) Write short note on (i) Bar Chart (ii) Cost time Tradeoff. **07**
