

**GUJARAT TECHNOLOGICAL UNIVERSITY****ME – SEMESTER –I-(New) EXAMINATION – SUMMER- 2019****Subject Code: 3711408****Date: 08/05/2019****Subject Name: Planning, Scheduling & Control of Construction Projects****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.

- Q.1** (a) Define & explain the terms: Construction, Project and Management. **07**  
 (b) Enlist and explain the core functions of Project Management. **07**
- Q.2** (a) Explain the characteristics of construction industry. **07**  
 (b) Give a detail description on core construction participants. **07**

**OR**

- (b) Explain in detail: Construction Project Life Cycle. **07**
- Q.3** (a) Give the comparison of BOT and BOOT. **07**  
 (b) Explain the process and purpose of organization? **07**

**OR**

- Q.3** (a) Explain the relevance of construction management in project success. **07**  
 (b) Enlists various types of organization structure & mention feature good organization structure? **07**

- Q.4** (a) Draw the WBS for: (a) Residential Building (b) Pumping Station **07**  
 (b) A project schedule has following characteristics: **07**

Activity	Name	Time	Activity	Name	Time
1-2	A	4	5-6	G	4
1-3	B	1	5-7	H	8
2-4	C	1	6-8	I	1
3-4	D	1	7-8	J	2
3-5	E	6	8-10	K	5
4-9	F	5	9-10	L	7

- (1) Draw the network.
- (2) Determine critical path.
- (3) Determine ET, LT and TF for each activity.

**OR**

- Q.4** (a) Write a short note on LOB. Explain the advantages of LOB. **07**  
 (b) What is updating? Why updating is required? State the rules of networking. **07**
- Q.5** (a) Explain the following with respect to project cost management: Cost Planning, Cost Budgeting, and Cost Control. **07**

- (b) A small scale research project has a list of tasks to be performed whose time estimates are given in the table, as follows: 07

Activity i j	Activity Name	$T_o$	$t_m$ (in days)	$t_p$
1-2	A	4	6	8
1-3	B	2	3	10
1-4	C	6	8	16
2-4	D	1	2	3
3-4	E	6	7	8
3-5	F	6	7	14
4-6	G	3	5	7
4-7	H	4	11	12
5-7	I	2	4	6
6-7	J	2	9	10

- Draw the project network.
- Find the project duration and critical path.
- Find the probability that the project is completed in 19 days.  
[Assume,  $z(1.3416) = 0.4099$ ]

OR

- Q.5 (a) Explain in context of project quality control: Quality Standardization, Quality Cost, and Quality Audit. 07
- (b) Explain the role of Information Technology and Computation Techniques in project management. 07

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