

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2180611****Date: 15/11/2018****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) Why is construction management needed? **03**
 (b) Write a brief note on bar chart. **04**
 (c) What is network? Discuss various network rules. **07**

- Q.2** (a) Prepare a work breakdown structure for a residential building project. **03**
 (b) Enumerate and discuss principles of organization. **04**
 (c) What do you understand by floats? Differentiate clearly between 'total float', 'free float', and 'independent float'. **07**

OR

- (c) The data for the project is given in table. Prepare the network diagram with the estimated duration of various activities. **07**

Activity	Activity on arrow (i-j)	Duration	Activity immediately	
		(Days)	Preceded	Follow
A	1-2	8	-	C,E
B	1-3	9	-	D,G
C	2-4	12	A	F,dummy
D	3-4	15	B	F, dummy
E	2-5	7	A	H
F	4-7	12	C,D	-
Dummy	4-6	0	C,D	I
G	3-6	10	B	I
H	5-7	11	E	-
I	6-7	5	Dummy,G	-

Determine the following:

- 1). Critical path for the network,
- 2). Earliest start and finish time, latest start and finish time for each activity,

- Q.3** (a) What is line of balance method? **03**
 (b) Define: MARR, IRR and IROR. **04**
 (c) What do you mean by breakeven analysis? Which are the assumptions and advantages of breakeven analysis? **07**

OR

- Q.3** (a) Differentiate between serial and parallel activities. **03**
 (b) Which are the applications of funds flow statements? **04**
 (c) What are the objectives of resource allocation? Explain what do you mean by resource levelling? Explain step by step process of resource levelling. **07**

- Q.4** (a) What is cost slope? How do you determine it? **03**
 (b) Enumerate the factors for success of the construction project. **04**

- (c) Discuss Economic Order Quantity (EOQ) model with total cost curve. **07**
OR
- Q.4** (a) Write steps to solve linear programming problem by graphical method. **03**
(b) What is updation of project? What will be the frequency for updation? **04**
(c) Enumerate and discuss various causes of accidents. **07**
- Q.5** (a) Differentiate between quality assurance and quality control **03**
(b) Discuss ABC analysis for material management. **04**
(c) Enlist various forms of project management structure. Discuss pure project management with its advantages and disadvantages. **07**
- OR**
- Q.5** (a) Define: Worth, Cost and Value. **03**
(b) Write short note on unsafe acts. **04**
(c) Explain evaluation of public projects by benefit/cost ratio method. **07**

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