

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER-VI • EXAMINATION – SUMMER • 2014

Subject Code: X 60601**Date: 28-05-2014****Subject Name: Construction Management and Economics****Time: 10:30 am - 01:00 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) Write down importance of construction management to society. **07**
 (b) What is a bar chart? Explain bar chart with sketches and limitation. **07**
- Q.2** (a) What is a job layout draw the job layout for construction of a bridge. **07**
 (b) Differentiate between 1) Conventional method vs Network technique **07**
 2) Standard equipment vs Special equipment

OR

- (b) What is full form of ISO? What is an importance of ISO? **07**
- Q.3** (a) What is a float? **07**
 In a construction project following activity is planned draw the network and find out total project duration, critical activity, critical path and float at critical activity.

Sr.No	Activity	Duration	Predecessor	Successor
1	A	8	---	D
2	B	6	---	E
3	C	5	---	F
4	D	4	A	H
5	E	8	B	G,I
6	F	6	C	G,I
7	G	5	E,F	J
8	H	6	D	J
9	I	9	E,F	--
10	J	8	G,H	--

- (b) Explain in detail Resource allocation, Resource leveling, resource smoothing. **07**

OR

- Q.3** (a) The following table gives the data for duration and cost of each activity of a project network. The indirect cost of project is Rs.25000 per week. **07**
 Draw the network, Find out critical path, Total Project duration, find out Normal total cost of the project. Also find out cost slope.

Activity	Normal time	Normal Cost	Crash time	Crash Cost
1-2	5	150000	4	225000
1-3	3	200000	3	200000
2-3	10	175000	8	250000
2-4	5	223300	3	310000
3-4	9	324000	7	405000

- (b) What is updating? Why updating is necessary for any project? **07**

- Q.4 (a)** What are the qualities required for good construction manager? **07**
(b) Discuss in brief the various factors affecting the selection of construction equipments. **07**

OR

- Q.4 (a)** What is a material management? Why we give more importance to material management? **07**
(b) Why labour welfare is required? Why incentive for labour is required? **07**

- Q.5 (a)** Write factors affecting owning and operating cost of equipment? **07**
(b) The original cost of a Roller is 25,00,000/- and its salvage value is 9% of the original cost this machine is used for 1700 hrs per year and its life is 4.5 year. Cost of owning and operating is Rs.160 per hr. **07**
The hiring charges for the excavator inclusive of repair and maintenance is Rs. 110000/- per month. Suggest whether the equipment is buy or Hire.

OR

- Q.5 (a)** Write short note on “ Break even analysis” **07**
(b) Explain with sketches Back hoe an excavating equipment. **07**
