Seat No	
No	

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-VI • EXAMINATION - SUMMER • 2015

Subject code: X 60601 Date: 08/05/2015

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) Why material management have more important in construction 07 project?
 - (b) Write a short note on a) Three time estimate network technique b)Standard equipment.
- Q.2 (a) Explain in detail the function of construction management. 07
 - (b) Following table are the construction project data for duration and cost of each activity. The indirect cost of the project is Rs. 2000 / day Find out the Total project cost with out crashing. Cost slope and write down which activity will crash first and why?

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Activity	Normal	Normal	Crash	Crash Cost	
	duration in	cost in Rs.	Duration in	in Rs.	
	Days		Days		
1-2	10	10000	3	17000	
1-3	12	15000	6	24000	
2-4	15	12000	5	18000	
3-4	7	5000	2	10000	
3-5	18	25000	5	51000	
4-5	2	5000	2	5000	

OR

- **(b)** Write a short note on a) Updating b) Resource leveling
- Q.3 (a) What is a bar chart? Explain with sketch and limitation of barchart. 07
 - (b) Determine the break even sales for the following

Product A B C

Sales (Units)	5000	6000	4000
Unit Selling Price (Rs.)	10	15	18
Unit variable Price (Rs.)	6	4	13

Fixed cost of the product is Rs. 40,000/-

OR

Q.3 (a) Draw the barchart of following activity and find out the project 07 duration.

GOT WITCH			
Sr.No	Acrivity	Duration	
1	M	6	
2	N	10	

07

07

3	О	25
4	P	1
5	Q	7
6	R	5
7	S	3

Activity M is starting activity, activity N,O,P,Q are sequential activity and start after completion of each other, activity R&S are parallel activity and start after completion of activity Q

(b) The purchase cost of machine is 1000000 and is used for 2000hours **07** per year

Life of machine = 5 yrs

Salvage value = 8 % of the original cost.

Owning and operating cost = 60 per hr.

Hiring charges = Rs40000/- including maintenance and repair cost per month.

Suggest this machine should be purchased or Hire.

Q.4 (a) Draw the network for following data

Sr.No	Activity	Duration	Predecessor	Successor
•				
01	A	10	-	D,F,F
02	В	05	-	G
03	С	04	-	H,G
04	D	08	A	I,J
05	Е	05	A	J
06	F	04	A	G
07	G	08	B,F,C	J
08	Н	06	С	K,L
09	I	03	D	-
10	J	04	D,E,G	-
11	K	09	Н	_
12	L	08	Н	_

	(b)	Explain with sketches "Power shovel an excavating equipment. OR	07
Q.4	(a) (b)	Explain the term a) Salvage Value b) Depreciation c) Maintenance cost	07 07
Q.5	(a) (b)	Draw & explain a job layout for an industrial building. What is ISO? Explain in detail ISO 9001.	07 07
Q.5	(a) (b)	Explain the term a) Critical Path b) Dummy activity c)Standard Deviation What is Breakeven analysis? Where we use Break even analysis.	07 07

07