

B.Tech. SEM -V (Civil) 2014 Course (CBCS) : WINTER - 2018
SUBJECT: ENGINEERING PROJECT MANAGEMENT

Day: Tuesday
 Date: 27/11/2018

W-2018-2386

Time: 02.30 PM TO 05.30 PM
 Max Marks: 60

N.B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data, if necessary.
- 4) Use of non-programmable calculator is allowed.

- Q.1 a)** What is project? Give the objectives of project management. **(05)**
- b)** What is organization? Give the necessity of organization. **(05)**

OR

- Q.1 a)** Discuss project life cycle with suitable example. **(05)**
- b)** What are the responsibilities of project manager? **(05)**

- Q.2** Draw the network from the following data and determine EST, EFT, LST, LFT and determine total float. **(10)**

Activity	1-2	2-3	2-4	3-5	4-5	5-6	4-7	6-7	7-8	8-9
Duration (Days)	10	12	14	8	11	9	8	0	10	5

OR

- Q.2** Draw the network find out critical path and slack from given data. **(10)**

Activity	1-2	1-6	2-3	2-4	3-5	4-5	6-7	5-8	7-8
Optimistic time (t_o)	3	2	6	2	5	3	3	1	4
Most likely time (t_L)	6	3	12	5	11	6	9	4	19
Pessimistic time (t_p)	15	14	30	8	17	15	27	7	28

- Q.3** Determine the optimum duration and optimum cost by crashing the network from given data. Take indirect cost Rs. 1000/- per day **(10)**

Activity	Duration		Cost	
	Normal	Crash	Normal	Crash
1-2	5	3	400	600
1-3	5	1	300	500
2-4	10	5	400	700
3-4	7	2	400	600
4-5	11	6	300	500
4-6	6	4	600	930
5-7	5	1	300	600
6-7	4	1	200	400

OR

- Q.3 a)** What is resource allocation and resource leveling? **(05)**
- b)** Prepare flow chart for updating of networks. **(05)**

P.T.O.

- Q.4 a)** Discuss the classification of inventory. (03)
- b)** A stockiest expects a demand for particular product to be 15000 per year. The demand is expected to be fixed and constant per year. The inventory carrying cost per unit per annum is Rs 2.4 and the ordering cost is Rs 300/- per order determine EOQ, the optimum cycle time and total annual cost with the order quantity being EOQ. (07)

OR

- Q.4 a)** Discuss ABC analysis? (07)
- b)** What are the relevant costs while calculating the formula for EOQ? Give the formula. (03)

- Q.5** Solve the following LPP graphically maximize (10)
- $$z = 10x_1 + 20x_2$$
- $$2x_1 + x_2 \leq 40$$
- subject to $5x_1 - 2x_2 \leq 20$
- $$x_1 \geq 25$$
- $$x_1, x_2 \geq 0$$

OR

- Q.5** Solve LPP by simplex method minimize (10)
- $$z = 5x_1 + 4x_2 + 6x_3$$
- $$x_1 + x_2 + x_3 \geq 350$$
- subject to $x_1 \geq 125$
- $$2x_1 + x_2 + x_3 \geq 600$$
- $$x_1, x_2, x_3 \geq 0$$

- Q.6 a)** What is TQM? Give its importance in civil engineering. (05)
- b)** What is the necessity of MIS in management? (05)

OR

- Q.6 a)** What is the concept of quality control? (05)
- b)** Discuss six sigma concept. (05)

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