

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2020 COURSE)
B.Tech.Sem - IV CIVIL : WINTER- 2022
SUBJECT : ITC-II: PLANNING & MANAGEMENT OF CONSTRUCTION PROJECTS

Day : Wednesday

Time : 02:30 PM-05:30 PM

Date : 30-11-2022

W-24375-2022

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Use of **non-programmable calculator** is allowed.
- 4) Draw neat and labeled diagrams **wherever necessary**.
- 5) Assume suitable data **wherever necessary**.

Q.1 Explain basics of managements. What are the objectives and functions of (10) management?

OR

Q.1 What is Organizational structure? Explain various types of organizational (10) structures.

Q.2 Prepare the Network diagram for the project having activities A to H with (10) Following interdependencies. Also Number the events using Rules by Dr. Fulkerson

1. A is initially activity
2. B starts after A
3. C starts parallel with B
4. C controls D
5. B controls E
6. F is controlled by B
7. G starts once D gets completes
8. H is the last activity.

OR

- Q.2** a) What is work break-down structure? (05)
b) Explain bar charts and its limitations. (05)

Q.3 Define CPM and PERT. Give differences between CPM and PERT. (10)

OR

Q.3 Draw the PERT network , find out critical path, standard deviation, variance and (10) slack from following data:

Activity	Preceding Activity	Optimistic time	Most likely time	Pessimistic time
A	-	2	5	8
B	A	6	9	12
C	A	5	14	17
D	B	5	8	11
E	C, D	3	6	9
F	-	3	12	21
G	E, F	1	4	7

PTO

Q.4 Enlist the steps involved in resource smoothening give suitable example and draw the histogram. (10)

OR

Q.4 Draw the network and find out all crash solution by crashing the network. Indirect cost of the project is Rs. 120/- per day (10)

Activity	Normal		Crash	
	Duration	Cost (Rs.)	Duration	Cost(Rs.)
1-2	3	100	1	125
2-3	4	300	3	330
2-4	3	200	2	230
2-5	8	700	7	750
3-6	4	200	2	250
4-6	6	400	4	430
5-7	5	400	4	410
6-7	3	100	1	110

Q.5 Explain scope of material management and also explain Objectives of Material management. (10)

OR

Q.5 From the following information estimate the Economic Order Quantity, (10)

Annual usage – 40,000 units

Ordering costs – Rs. 400 per order.

Carrying cost- Rs 5 per unit per annum

Q.6 What is MIS? Explain applications of MIS in construction industry. (10)

OR

Q.6 a) Explain concept of quality control. (05)

b) Describe 'Six Sigma Concept'. (05)
