

	Sanjay Ghodawat University, Kolhapur Established as State Private University under Govt. of Maharashtra. Act No XL, 2017		2018-19 EXM/P/09/00
Year and Program M.TECH. Construction Tech.& Mgt.	School of Technology	Department Civil Engineering	
Course Code CEM 505	Course Title CONSTRUCTION PLANNING SCEDULING AND CONTROL	Semester – I	
Day and Date: Friday 21 Dec 2017	Examination: ESE	Time: Max Marks: 100 10:45 1:00 pm	

Instructions:

- 1) All questions Compulsory.
- 2) Assume suitable data and mention it clearly.

		Mark	Bloom's Level	CO
Q.1	What is a network diagram? What is difference between CPM and PERT?	10	2	1

OR

	Discuss importance of integrated planning, scheduling and controlling of construction projects.	10	2	1
Q.2	Following is the activity duration data for a construction project. Construct Network diagram, estimate the time duration for project and decide the critical activities.	10	4	2

Activity	1-2	1-3	1-4	2-4	2-5	3-6	4-6
duration	4	12	10	8	6	8	10

Activity	5-7	6-7	6-8	7-8	8-9
duration	10	0	8	10	6

Q-3	Table below gives the data of duration and costs of various activities of a project. The project overhead costs are Rs 2000/week. Find the optimum duration and cost associated with it. Also draw the total cost duration curve.	10	4	3
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Activity	Normal Duration	Normal Cost Rs.	Crash Duration	Crash Cost Rs.
1-2	4	4000	2	12000
2-3	5	3000	2	7500
2-4	7	3600	5	6000
3-4	4	5000	2	10000

OR

Following is the data about activity, duration and manpower required for a project. Plot the resource usage profile or histograms and carry out resource smoothing.

10 4 3

Activity	Duration	Masons (M)	Laborers (L)
1-2	2	1	2
2-3	3	2	2
2-4	4	3	2
2-5	2	1	3
3-10	4	2	2
4-6	2	3	2
4-7	4	3	3
5-9	4	5	3
6-8	2	1	2
7-9	5	1	3
8-9	3	-	4
9-11	2	1	1
10-11	3	1	2
11-12	2	1	2

Q-4 Explain the forecasting of profit and loss with the help of S curve. 10 2 4

OR

Explain in brief the methods of estimating project costs. 10 2 4

Q-5 Solve any three of following.

- a Describe the special problems associated with the safety of construction site. 10 2 5
- b What is a control chart? Describe its uses. 10 2 5
- c Describe objectives of safety policy and What should be the safety policy of a construction firm? 10 2 5
- d List the sources and provide a description of the safety standards to be adopted for construction. 10 2 5

Q-6 Solve any three of following.

- a Explain the purpose of data codification. 10 2 6
- b What are the requirements of a successful MIS? State some of its Limitations? 10 2 6
- c Describe benefits of ERP application and Prerequisites in PMIS. 10 2 6
- d Write the contents of PMIS monthly Report. 10 2 6
