

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2019 - 20 Examination

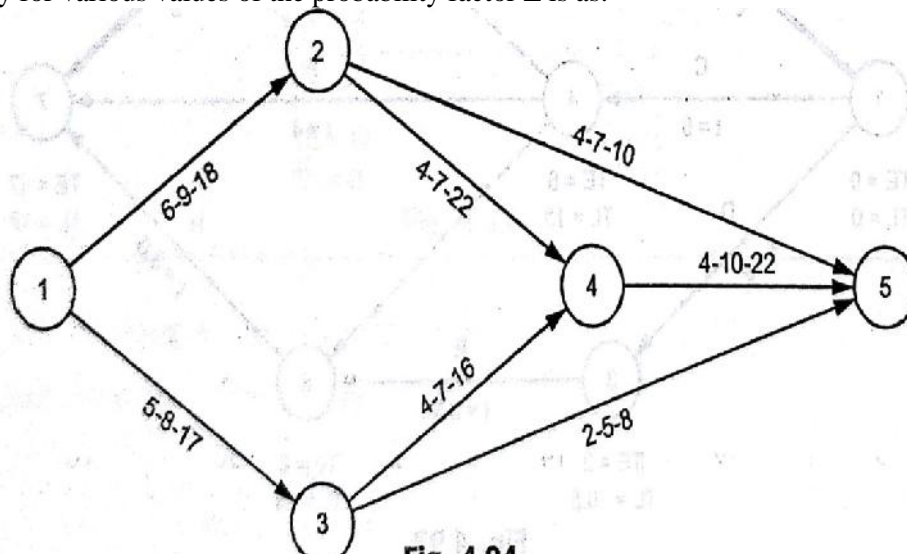
Semester: 1
Subject Code: 203216101
Subject Name: Project Management

Date: 16/12/2019
Time: 10:30am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) What do you understand by floats? Differentiate clearly between 'total float', free float and independent float. (05)
 B) Write short notes on: 1) line and staff organization. 2) Departmental organization. (05)
 C) Define updating and its necessity in construction project. (05)
- Q.2** Answer the following questions. (Attempt any three) (Each five mark) (15)
 A) Discuss in brief three steps involved in cost control and why cost control is important?
 B) Discuss different functions of material management? Explain.
 C) Define TQM. Write aims of TQM.
 D) Distinguish between resource leveling and resource smoothing.
- Q.3** A) Discuss different inventory analyses? Explain each of them. (07)
 B) For the network shown in the figure given below, the time estimates in days for each activity are indicated. Determine the critical path and the probability of completing the project in 35 days. The probability for various values of the probability factor Z is as:

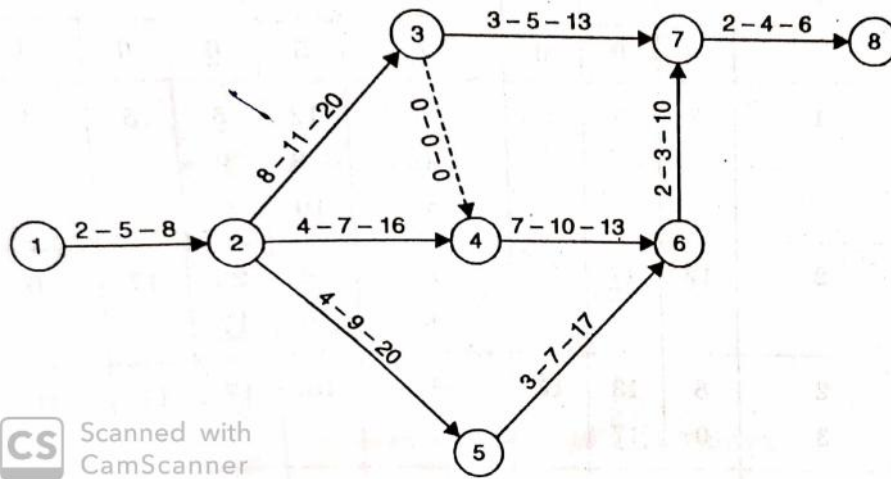


Z	1	1.1	1.2	1.3
Probability	84.13	86.43	88.49	90.32

OR

B) Figure shows the network for a construction project, with the three time estimates of each activity marked. Determine:

- i. Critical path and its standard deviation. (08)
- ii. Probability of completion of project in 40 days.
- iii. Time duration that will provide 95.54% probability of its completion in time.



Z	1.6	1.7	1.8	1.9
Probability	94.52	95.54	96.41	97.13

A) The activities list, duration and requirement of the plumbers for each activity of the plumbing project have shown in table. Carry out the resource allocation if only 5 numbers of plumbers are available for the project. Also, draw network diagram.

Q.4

ACTIVITY	DURATION	NO. OF PLUMBERS REQUIRED
1-2	3	5
1-5	2	2
2-3	4	5
2-5	3	1
3-4	3	4
4-5	2	3

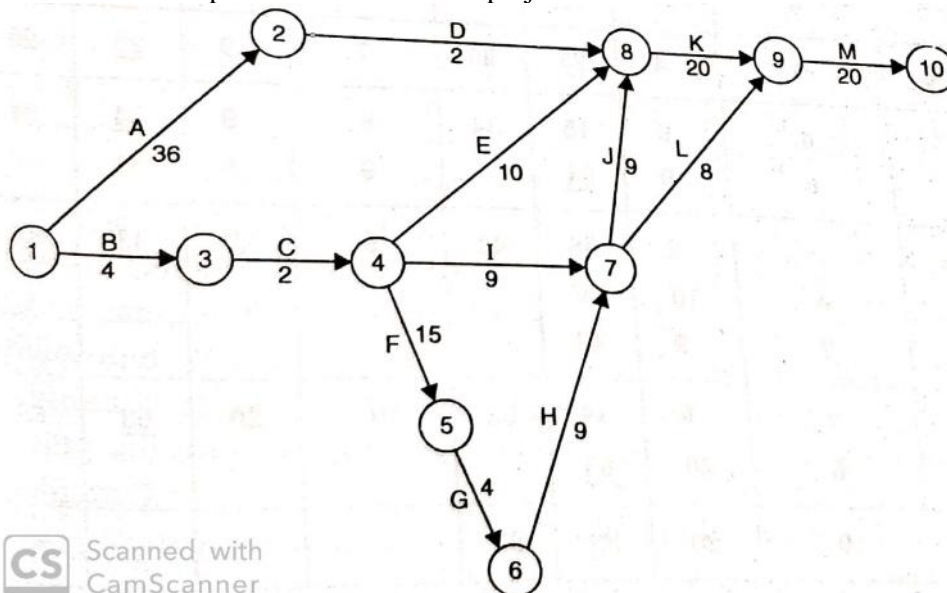
(07)

OR

A) Explain importance of multiple resource leveling in construction projects.

(07)

B) From the data given diagram, compute activity times, Total float, Free float and independent float. Locate the critical path for network of the project.



(08)