PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2018 - 19 Examination

Semester: 1   **Date: 10/12/2018**
Subject Code: 203216101   **Time: 10:30 am to 1:00 pm**
Subject Name: Project Management   **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) Write short note on Construction quality management **(05)**
         B) Differentiate between bar chart and milestone chart. **(05)**
         C) Discuss economic order quantity (EOQ) model. **(05)**
Q.2 **Answer the following questions**. (Attempt any three) (Each five marks) **(15)**
         A) Draw the network for the following:
         1) Activity A is the starting activity.
         2) Activity B & C follows activity A.
         3) Activity D & E succeeds activity B.
         4) Activity C precedes activity E.
         5) Activity F starts only after completion of activity D & E.
         B) Write short note on quality assurance (QA).
         C) Write short notes on: 1) line organization 2) line and staff organization.
         D) Explain importance of multiple resource leveling in construction projects.
Q.3 A) What are different inventory analyses? Explain each of them. **(07)**
         B) What is WBS? Explain its importance in planning, monitoring and controlling the project **(08)**
         management process. Draw WBS for bridge construction project.
<div align="center">OR</div>

         B) What is the need of construction management? Explain in detail 'Parties involved in a **(08)**
         construction project'.
Q.4 A) Discuss deming and juran's suggested steps for quality management. **(07)**
<div align="center">OR</div>

         A) For the network shown in the figure given below, the time estimates in days for each activity are **(07)**
         indicated. Determine the critical path and the probability of completing the project in 36 days.
         The probability for various values of the probability factor Z is as:

Fig. 4.94
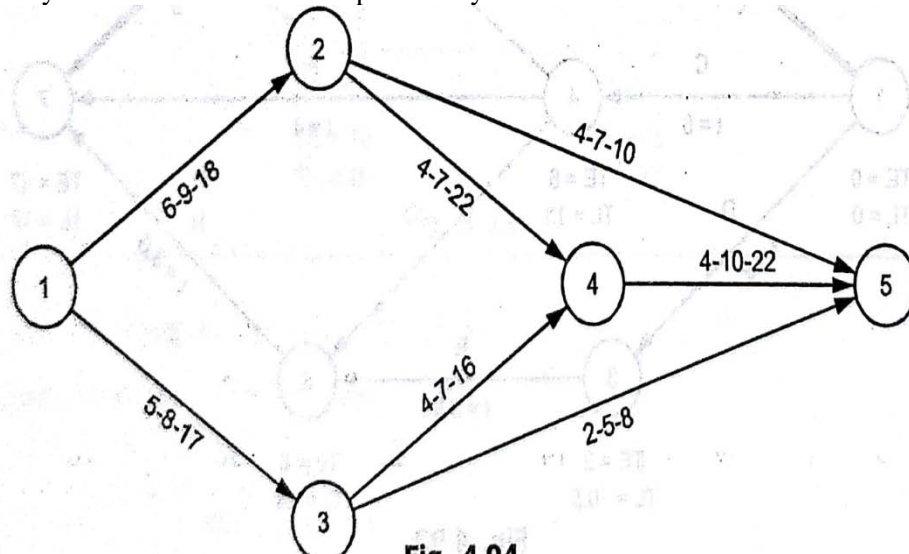
Z	1	1.1	1.2	1.3
Probability	84.13	86.43	88.49	90.32

B) From the data given below, prepare network diagram and compute activity times, Total float, **(08)**
Free float, independent float and interfering float. Locate the critical path for network of the project.

Activity	Activity Arrow	Duration	Preceding Act	Following
A	1-2	8	None	D,E
B	1-3	6	None	F
C	1-4	10	None	G,H
D	2-5	8	A	I,J
E	2-7	15	A	L
F	3-5	10	B	I,J
G	4-5	8	C	I,J
H	4-6	10	C	K
I	5-6	10	D,F,G	K
J	5-7	10	D,F,G	L
K	6-7	8	H,I	L
L	7-8	7	E,J,K	None

Activity	Activity Arrow	Duration	Preceding Act	Following