

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**Regular End Semester Examination – Summer 2022**

**Course: B. Tech.**

**Branch : Civil Engineering**

**Semester : VI**

**Subject Code & Name: BTCVC604 Project Management**

**Max Marks: 60**

**Date: 23/08/2022**

**Duration: 3.45 Hr.**

**Instructions to the Students:**

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

(Level/CO) Marks

**Q. 1 Solve Any Two of the following.**

- A) Explain phases in a construction project management. **(CO1) 6**
- B) Draw the network and find the project duration and critical path. **(CO2) 6**

Activity	A	B	C	D	E	F	G	H	I	J	K
Predecessor	--	--	--	A	B	B	C	D	E	G, F	H, I
Duration (Days)	7	10	5	8	10	13	6	5	6	9	7

- C) Find Total float associated with the project in Q. 1 (B) **(CO2) 6**

**Q.2 Solve Any Two of the following.**

- A) Define network compression and Explain various methods. **(CO3) 6**
- B) Draw network and find the project duration (days) and project cost. Take indirect cost as 100 Rs./day. **(CO3) 6**

Activity	A	B	C	D	E	F	G	H	I	J	K
Predecessor	--	--	--	A	B	B	C	D	E	G, F	H, I
Normal Time	10	15	8	10	15	18	10	12	8	10	10
Normal Cost	8000	10000	5000	7000	15000	20000	3000	4000	7000	5000	2000
Crash time	12	18	10	13	18	21	13	15	10	10	12
Crash cost	10000	11500	7000	8500	15900	21500	3600	4900	7200	5000	2100

- C) Crash the project mentioned in Q.2 B by 5 days and find the crash cost. **(CO3) 6**

**Q. 3 Solve Any Two of the following.**

- A) Differentiate between resource leveling and resource smoothing. **(CO3) 6**
- B) Draw network diagram and find the project duration (days) and critical path. **(CO3) 6**

Activity	1-2	2-3	2-4	3-4	3-5	2-6	4-6	5-6	6-7
to	6	3	2	4	1	5	7	1	3
tm	9	4	5	6	2	6	8	2	5
tp	12	11	14	8	3	7	15	3	7

- C) Find the Z value if the Project mentioned in Q.3 B. has to be completed in 30 days. (CO3) 6

**Q.4 Solve Any Two of the following.**

- A) Explain various interest formulae and their significance. (CO4) 6  
B) Find the value of Rs. 30000 deposited annually after 5 years with 8% p.a. (CO4) 6  
C) Fixed cost is 30 lakhs, Variable cost is Rs. 10, If the revenue for each item is Rs. 70, Calculate Break even Quantity. (CO4) 6

**Q. 5 Solve Any Two of the following.**

- A) Explain the process of quality control in construction projects. (CO5) 6  
B) Discuss Philosophy of Deming. (CO5) 6  
C) Explain use of Computers in Project Management. (CO5) 6

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