

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: MTECH / PRE-PHD
BRANCH: CIVIL**

**SEMESTER : I
SESSION : MO/2025**

SUBJECT: CE579 CONSTRUCTION TECHNOLOGY & PROJECT MANAGEMENT

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Briefly discuss about the different forms of business organization.	[5] 1	II
Q.1(b)	What are the factors behind the success of a construction organization.	[5] 1	III
Q.2	There are two alternatives for purchasing a concrete mixer. Both the alternatives have same useful life. The cash flow details of alternatives are as follows; Alternative-1: Initial purchase cost = Rs.300000, Annual operating and maintenance cost = Rs.20000, Expected salvage value = Rs.125000, Useful life = 5 years. Alternative-2: Initial purchase cost = Rs.200000, Annual operating and maintenance cost = Rs.35000, Expected salvage value = Rs.70000, Useful life = 5 years. Using future worth method, find out which alternative should be selected, if the rate of interest is 10% per year.	[10] 2	V
Q.3(a)	(i) What is dummy activity ? (ii) Compare between slack and float.	[5] 3	II
Q.3(b)	Construct the network for the manufacture of a storage cabinet, given the following specifications: 'A simple storage cabinet is to be manufactured by fabrication and assembly of frame and panels. The cabinet is to be painted. Panels and paint are available from the store.'	[5] 3	V
Q.4(a)	What are the benefits of effective inventory management ?	[5] 4	III
Q.4(b)	What are the different components of project cost ? Briefly discuss.	[5] 4	II
Q.5(a)	Write a short note on risk identification process.	[5] 5	IV
Q.5(b)	Write the role of safety personnel to prevent accident in a construction project.	[5] 5	III

:20/11/2025:E