

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2025)**

**CLASS: BTECH
BRANCH: CIVIL**

**SEMESTER : IV
SESSION : SP/2025**

SUBJECT: CE209 CONSTRUCTION ENGINEERING AND MANAGEMENT

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

	CO	BL
Q.1(a) Who are the stakeholders of a construction project ?	[2] 1	II
Q.1(b) Briefly discuss different hierarchy/ structures of an organization.	[3] 1	III
Q.2(a) What are ethics to be followed by engineers involved in a project ?	[2] 1	I
Q.2(b) Briefly discuss different forms of business organization.	[3] 1	III
Q.3(a) Explain cash flow diagram with the help of an example.	[2] 2	II
Q.3(b) Fill in the blanks:	[3] 2	V
i) Rs. 50,000 now is equivalent to Rs._____ after 10 years at a rate of interest 10 %.		
ii) Rs. 50,000 now is equivalent to annual payment of Rs._____ for a period of 10 years at an interest rate of 10 %.		
Q.4 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.	[5] 2	V
Q.5(a) Define Event and Activity. Provide one example of each.	[2] 3	II
Q.5(b) Draw network of any project showing different events and activities involved. Describe the same briefly.	[3] 3	IV

:28/02/2025:E