

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI**  
**(MID SEMESTER EXAMINATION SP2023)**

**CLASS: BTECH**  
**BRANCH: CIVIL**

**SEMESTER : IV**  
**SESSION : SP2023**

**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
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		CO	BL
Q.1(a) What are the phases of a project ? Briefly discuss.	[2]	1	I
Q.1(b) Write and briefly discuss the important traits of a project coordinator.	[3]	1	VI
Q.2(a) Who are the stakeholders of a construction project ?	[2]	1	I
Q.2(b) List and Discuss the ethical conducts to be followed by the engineers.	[3]	1	IV
Q.3(a) Explain cash flow diagram. Support your answer with figure.	[2]	2	II
Q.3(b) What are the importance of present worth/annual worth/future worth calculations on feasibility of a project ?	[3]	2	I
Q.4 Determine the present worth of a concrete mixer on the basis of the following data: Initial purchase cost = Rs. 3,00,000; Annual operating and maintenance cost = Rs. 20,000; Expected salvage value = Rs. 1,25,000; Useful life = 5 years; Rate of interest = 10 %.	[5]	2	V
Q.5 Determine the annual worth of a machine using the given information: Initial purchase cost = Rs. 2,00,000; Annual operating and maintenance cost = Rs. 35,000; Annual revenue generated by the machine = Rs. 45,000; Expected salvage value = Rs. 70,000; Useful life = 5 years. Rate of interest = 10 %.	[5]	2	V

:22/02/2023:M