

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS- 2026

M.Tech-II Semester (CM)

COURSE CODE (CREDITS): 10M11CE214 (3)

MAX MARKS: 25

COURSE NAME: Construction Financial Management

COURSE INSTRUCTOR: Dr. Ashok Kumar Gupta

MAX. TIME: 1 Hour 30 Min

*Note: (a) All questions are compulsory.**(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems**(c) Use of calculator is allowed*

Q.No	Question	Marks
Q1	i. Out-of-pocket cost refers to: a) Fixed cost b) Sunk cost c) Actual cash expenditure d) Opportunity cost ii. Working capital is defined as: a) Total assets – total liabilities b) Current assets – current liabilities c) Fixed assets – depreciation d) Profit after tax iii. Which of the following is a component of working capital? a) Land b) Machinery c) Inventory d) Building iv. Net Present Worth (NPW) method is based on: a) Future value b) Present value c) Average value d) Book value v. A positive NPW indicates: a) Loss b) Break-even c) Profitability d) No investment vi. Future Worth (FW) method converts all cash flows to: a) Present time b) Initial time c) End of project period d) Mid period vii. Opportunity cost is: a) Recorded in accounts	10X0.5 = 5

	b) Ignored in decisions c) Benefit of next best alternative d) Fixed cost viii. Increase in working capital requirement will: a) Increase liquidity b) Reduce cash flow c) Increase profit d) Have no effect ix. Discounting is used in: a) Future worth method b) Net present worth method c) Payback method d) Ratio analysis x. Sunk cost is: a) Recoverable cost b) Future cost c) Past cost not recoverable d) Variable cost																
Q2	A construction firm is choosing between two project investments: <table> <tr> <th>Year</th><th>Alternative X (₹)</th><th>Alternative Y (₹)</th></tr> <tr> <td>0</td><td>-4,00,000</td><td>-5,00,000</td></tr> <tr> <td>1</td><td>1,20,000</td><td>1,80,000</td></tr> <tr> <td>2</td><td>1,20,000</td><td>1,80,000</td></tr> <tr> <td>3</td><td>1,20,000</td><td>1,80,000</td></tr> </table> At an interest rate of 12%, compute: a) Future Worth of both alternatives at the end of year 3 b) Select the better alternative	Year	Alternative X (₹)	Alternative Y (₹)	0	-4,00,000	-5,00,000	1	1,20,000	1,80,000	2	1,20,000	1,80,000	3	1,20,000	1,80,000	7
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Q3	A contractor is evaluating two alternatives for a construction project. The details are as follows: Alternative A - Initial cost = ₹8,00,000 - Annual revenue = ₹3,00,000 for 4 years - Annual operating cost = ₹1,20,000 - Working capital required = ₹1,00,000 (fully recovered at end of year 4) - Salvage value = ₹80,000 Alternative B - Initial cost = ₹10,00,000 - Annual revenue = ₹4,00,000 for 4 years - Annual operating cost = ₹2,00,000 - Working capital required = ₹1,50,000 (only 80% recovered at end of year 4) - Salvage value = ₹1,20,000 - Interest rate = 10% per annum - Ignore taxes	9															

	i) Compute Net Present Worth (NPW) of both alternatives ii) Carefully account for working capital (this is where most students make mistakes) iii) Select the better alternative iv) Briefly comment: <i>Why is working capital treated differently from cost?</i>	
Q4	Q4. What is time value of money? Define and explain. (4 Marks) A contractor has to choose between two payment options for a project: • Option A: Receive ₹5,00,000 now • Option B: Receive ₹2,00,000 at the end of each year for the next 3 years If the interest rate is 10% per annum , which option is financially better?	4