JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-I Semester (CSE/IT/BT/ECE/CE)

COURSE CODE (CREDITS): 10M11CE213 (3) MAX. MARKS: 15

COURSE NAME: CONSTRUCTION COST ANALYSIS

COURSE INSTRUCTOR: Dr. KAUSHAL KUMAR MAX. TIME: 1 Hour

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Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculators is allowed

Q.No	Question	CO	Marks
Q1	Explain the concept of Construction Cost Analysis. Discuss its objectives, key benefits, and why it is important for minimizing financial risk and controlling cost overruns in construction projects	1	3
Q2	Compare and explain the three major construction cost estimating methods: Elemental Cost Analysis, Comparative Analysis, and Parametric Estimating. Discuss their principles, advantages, limitations, and suitability for different types of construction projects.	1	3
Q3	Explain any **three** from the following; (a). Book Value of an assets or property (b). Salvage Value (c). Capital recovery factor (d) Sinking fund factor	1	3
Q4	List our different types of depreciations. The original cost of an equipment is Rs. 10,000. Its salvage value at the end of its total useful life of five years is Rs. 1,000. Find its book value at the end of two years of its useful life (as per straight line method of evaluation of depreciation).	1	3
Q5	The fixed costs for the year 2014–15 are Rs. 80,000. The estimated sales for the period are valued at Rs. 300,000. The variable cost per unit for the single product made is Rs. 10/-. If each unit sells at Rs. 30 and the no. of units involved coincide with the expected volume of output, construct the Break-Even Chart and determine the following. (a). The Break-Even Point (b) Profit earned at a turnover of Rs. 200000/- (c). Margin of safety (*You may use graph paper if required*)	1	3

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Useful Formulas:

Type of Series	To Find	Given	Factor to be Multiplied with Given	Name of Factor	Representation
Single payment	F	P	$(1 + i)^n$	SPCAF	(F/P, i, n)
Single payment	P	F	$1 / (1 + i)^n$	SPPWF	(P/F, i, n)
Uniform payment	P	A	$[(1 + i)^n - 1] / [i(1 + i)^n]$	USPWF	(P/A, i, n)
Uniform payment	A	P	$i(1 + i)^n / [(1 + i)^n - 1]$	CRF	(A/P, i, n)
Uniform payment	F	A	$[(1 + i)^n - 1] / i$	USCAF	(F/A, i, n)
Uniform payment	A	F	$i / [(1 + i)^n - 1]$	SFF	(A/F, i, n)

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