PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 29-10-2025   **Time:** 02.30pm to 04.00pm

School: SOE	**Program:** B.Tech Civil Engineering	
Course Code: CIV3038	**Course Name:** Construction Economics and Finance	
Semester: VII	**Max Marks**: 50	**Weightage**: 25%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	40	10			

Instructions:

    (i) Read all questions carefully and answer accordingly.

    (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.   **5Q x 2M=10M**

1	Define simple interest and compound interest.	2 Marks	L1	CO1
2	What are the different types of TVM calculations?	2 Marks	L1	CO1
3	Define Equivalence with an example.	2 Marks	L1	CO1
4	Taylor wants to know how large her deposit of $10,000 today will become at a compound annual interest rate of 10% for 4 years.	2 Marks	L1	CO1
5	Assume that you need $1,000 in 2 years. Let's examine the process to determine how much you need to deposit today at a discount rate of 5% compounded annually?	2 Marks	L1	CO1

Part B

Answer the Questions.   **Total Marks 40M**

6.	a.	Explain the various quantifying alternative techniques of decision-making.	10 Marks	L2	CO1
		Or			
7.	a.	Explain the terms in detail with an example: (a) Future Value, (b) Present Value, (c) Arithmetic gradient, (d) Geometric gradient, (e) Rate of Return	10 Marks	L2	CO1

8.	a.	John and Peggy recently bought a house. They financed the house with a $125,000, 30-year mortgage with a nominal interest rate of 7 percent. Mortgage payments are made at the end of each month. What total dollar amount of their mortgage payments during the first three years will go towards repayment of principal?	10 Marks	L3	CO1
		Or			
9.	a.	A couple wants to begin saving money for their child's education. They estimate that $10,000 will be needed on the child's 18th birthday, $12,000 on the 19th birthday, $14,000 on the 20th birthday, and $16,000 on the 21st birthday. Assume an 8% interest rate with only annual compounding. The couple is considering two methods of setting aside the needed money. How much money would have to be deposited into the account on the child's first birthday (note: a child's "first birthday" is celebrated one year after the child is born) to accumulate enough money to cover the estimated college expenses?	10 Marks	L3	CO1

10.	a.	You are planning for retirement 34 years from now. You plan to invest $4,200 per year for the first 7 years, $6,900 per year for the next 11 years, and $14,500 per year for the following 16 years (assume all cash flows occur at the end of each year). If you believe you will earn an effective annual rate of return of 9.7%, what will your retirement investment be worth 34 years from now?	10 Marks	L3	CO1
		Or			
11.	a.	You are valuing an investment that will pay you $12,000 the first year, $14,000 the second year, $17,000 the third year, $19,000 the fourth year, $23,000 the fifth year, and $29,000 the sixth year (all payments are at the end of each year). What is the value of the investment to you now, if the appropriate annual discount rate is 11.00%?	10 Marks	L3	CO1

12.	a.	Cost-benefit analysis is the process of comparing the total costs and benefits of a decision. It helps determine if a project or investment is financially feasible and beneficial for the organization. Why is conducting a cost-benefit analysis important?	10 Marks	L2	CO2
		Or			
13.	a.	Explain the following with examples: (a) Ownership cost, (b) Operating cost, (c) Depreciation, (d) Inflation, (e) Taxes	10 Marks	L2	CO2