



MANIPAL INSTITUTE OF TECHNOLOGY
BENGALURU
(A constituent unit of MAHE, Manipal)

073

SESSIONAL RECORD

DEPT.: CSE-CORE

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REG.NO.: 225805222

SEMESTER: VI

SECTION: CSE-CORE-A

ROLL NO.: 39

SUBJECT: Engineering Economics Financial Management

DATE OF TESTS: 08/April/2025

MAX MARKS : 15/20

MARKS OF: I TEST

II TEST

MARKS FOR VALUATION - I TEST

MARKS FOR VALUATION - II TEST

Q. No.	FOR THE TEACHER TO AWARD MARKS					TOTAL MARKS	Q. No.	FOR THE TEACHER TO AWARD MARKS					TOTAL MARKS
	a	b	c	d	e			a	b	c	d	e	
1							1						
2			.				2						
3							3						
4							4						
5							5						
6							6						
TOTAL IN FIGURES							TOTAL IN FIGURES						13

IN WORDS _____

IN WORDS _____

Signature of the Candidate

Signature of the Invigilator

Signature of the Teacher

M.C.Q.S

- Q.1) option a) ~~12.55%~~
- Q.2) option d) None of the above
- Q.3) option c) ~~₹ 9668~~
- Q.4) option a) ~~₹ 8400~~
- Q.5) option d) ~~₹ 30742~~
- Q.6) option b) ~~12.68%~~
- Q.7) option a) None of the ~~above~~
- Q.8) option b) ~~₹ 2975~~
- Q.9) option c) Remains the ~~same~~
- Q.10) option d) None of the ~~above~~

6

Q.11.a) Given: $n = 5$ years

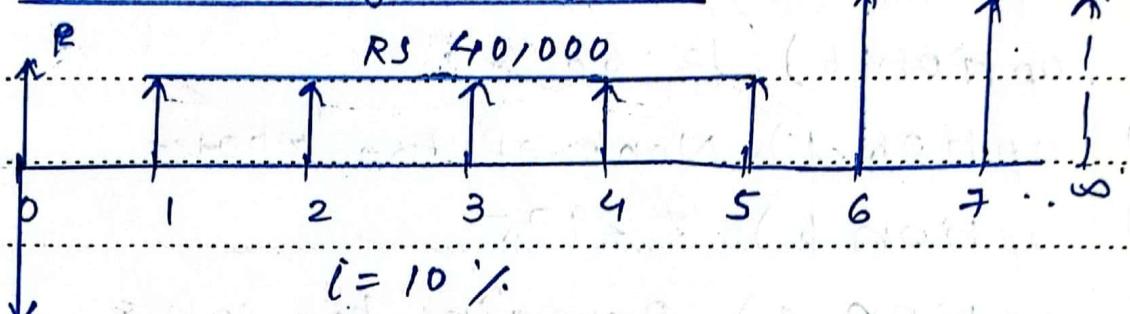
Amount = 40,000 + P II. $n = 5$ years

Amount = 1,00,000/-

$i = 10\%$ per annum simple interest

Calculate: Future & Present Worth = ?

Cash Flow Diagram (CFD)



PW = ?

$$PW = (P/F, i, n) 40,000 + (P/F, i, n) 100000$$

$$PW = 40,000 (P/F, 10\%, 5) + 100000 (P/F, 10\%, n)$$

Q. 11(5) You deposit ₹ 10,000 in an account. For first 3 years, it earns 12% interest compounded monthly. Then for the next 2 years, it earns 15% interest compounded semi-annually. How much money will you have after 5 years.

Given :- deposited amount = ₹ 10,000

$P = 10,000$ for $n=0$ to $n=3$

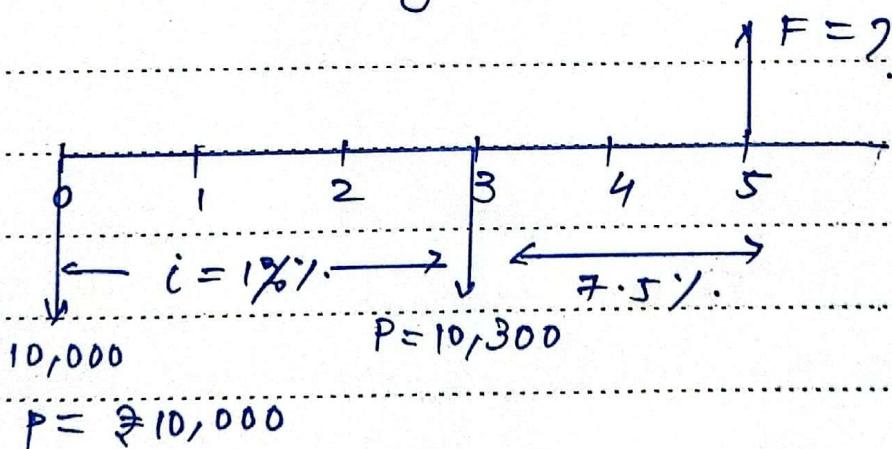
$i = 12\% / \text{monthly}$ [$i = 1\%$]

from $n=3$ to $n=5$ $i = 15\% / 2 = 7.5\%$

To Find :- Future accumulated sum after $n=5$

Cash-Flow-Diagram

2



Till $n=3$

compound Amount

$$F_1 = P(F/P, i, n)$$

$$= 10,000 (F/P, 1\%, 3)$$

$$10,000 \times 1.030$$

$$= 10,300$$

$$F_2 = 10,300 (F/P, 7.5\%, 3)$$

$$F_2 = 10,300 (1 + 7.5)^3$$

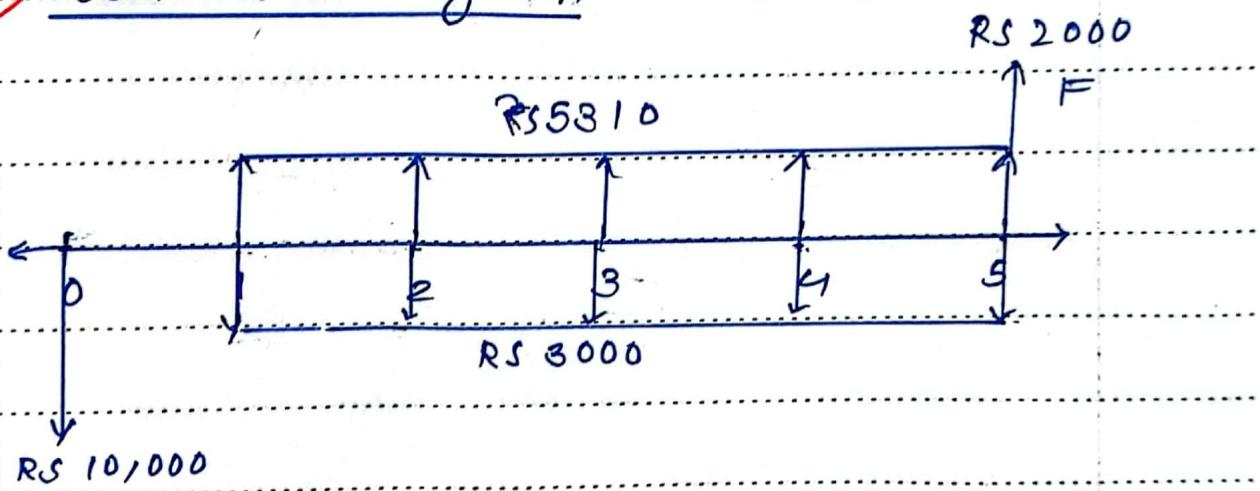
$$F_2 = 10,300 (9.5)^3$$

Q. 12 b) In Given :- Investment Amt = ₹ 10,000
 Uniform Annual Revenue = ₹ 5310
 $n = 5$
 Market (recovery value) = ₹ 2000
 $n = 5$

Annual expenses : 3000 Rs each year

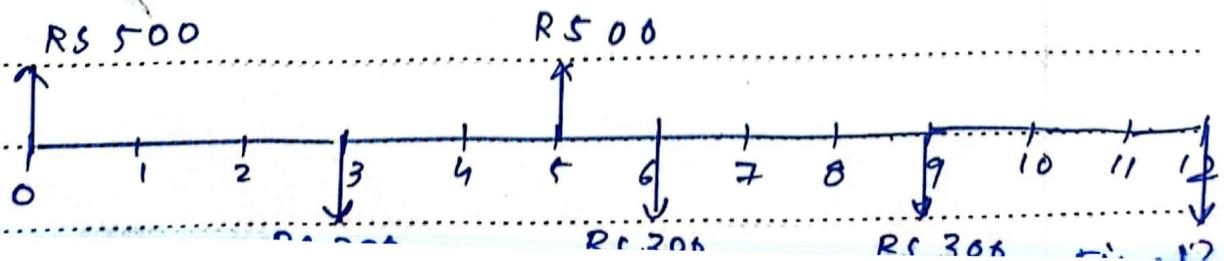
To construct a cash flow diagram:

✓ cash flow diagram



Q. 12 c) Given :- loan amount ($n=0$) : ₹ 5000
 loan amt ($n=5$) : ₹ 500
 $P = \text{pay Amt} \text{ ₹ } 300 \text{ At } n=3, n=6, h=9$
 remainder $n=12$ $i = 12\% / 2 = i = 6\%$

✓ To calculate :



$$i_{\text{effective}} = \left(1 + \frac{r}{m}\right)^m - 1$$

Quarter - 3

$$\left(1 + \frac{12}{4}\right)$$

$$(1+3)^4 - 1$$

Annual
Semi-

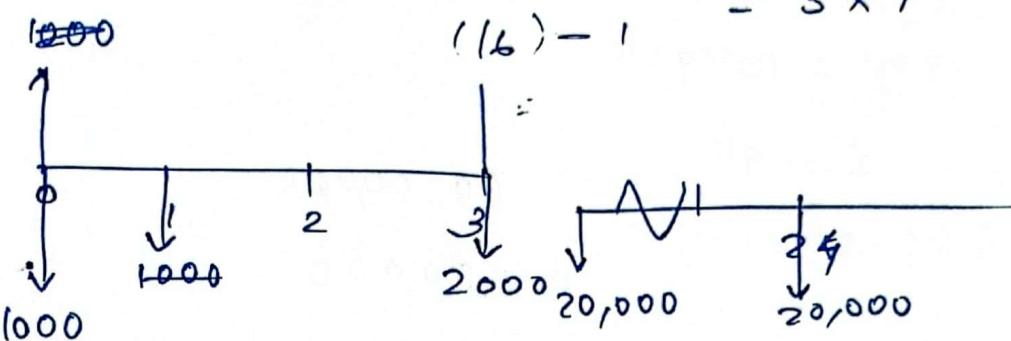
$$\frac{12}{3}$$

$$c = i \times m$$

$$4$$

$$(4)$$

$$= 3 \times 4$$



$$P_w =$$

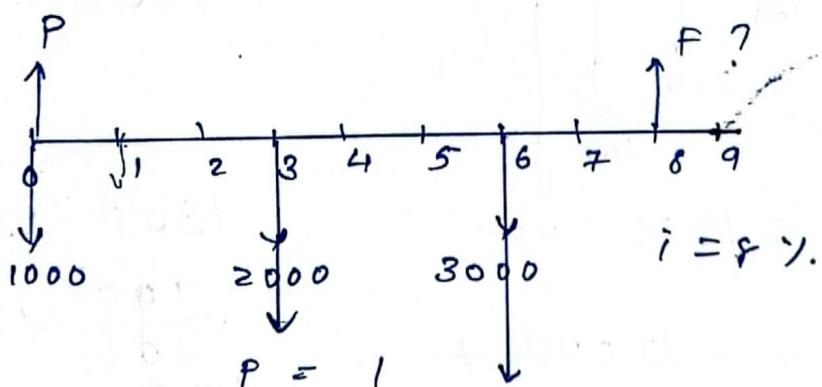
$$(P/A, i, n)$$

$$i = 8\%$$

$$\frac{600}{60L}$$

$$(P/A, 8, 25) = 14.094$$

FOR ROUGH WORK ONLY



$$1000 \left[\frac{(1+8)^1 - 1}{8(1+8)^1} \right]$$

$$2000 \left[\frac{(1+8)^3 - 1}{8(1+8)^3} \right]$$

$$1000 \times \frac{9-1}{8(9)} = 1000 \times \frac{8}{8 \times 9}$$

$$111.111$$

$$\frac{728}{8 \times 729} \times 2000$$

$$299.65$$

$$2000 [(1+8)$$

$$3000 [$$