, b		F		Seat Nu	ımber :	
Note:	on: 3.00 Hours 1. All questions ar 2.Figures to the ri 3. Use of Simple c	re compulsory ight indicate m	iarks.	BM (11)	Ma	rks: 80
Q1) (A)	Select the right an	nswer from tg	e following M	ultiple choice quest	tions. (Any 8)	8 M
1) In revo	enue function p is e	equal to	<u> </u>			(CO1,R)
A	.) AR	B) MR	C) MA	C D) MAR	37 S	
2) Deriv A	atives of 100x will 1	be	C) x	D) 100		(CO2,R)
3) The de A	erivatives of $y = 4x$ 10 B) 20	$x^2 + 4$ is always	·	D) 8x		(CO1,R)
	are matrix, having a Scaler matrix			o and all diagonal el Diagonal matrix		
	is an arrange a) Permutation		part of a set ob	ojects in a definite or ation (d) Factor		(CO2 ,R)
6) Find t interest p	he future value of	Rs. 30,000 ke	ept in a fixed	deposit account, aft	er 6 years at 8% 1	rate of compound
_) 47,600	B) 30,000	C) 44,400	D) 35,000		(CO3,R)
7) In how A	many years a sum) 4 years	of Rs. 50,000 B) 1.5 years	will amount to C) 2 years	D) 1 year	simple interest?	(CO3,R)
A	unnuities are paid a) Immediate Annui			known as an C) Annuity Certa	in D) Annuity I	(CO1,R) Due
9) 5!/2! = &		B)20	C)30	D) 60		(CO2,R')
10) 0! =						
A) 1	B) 0	C) 100	D) 10			(CO1,R)
Q1) (B) S	State whether the	following state	ements are Tr	ue or False.		7M
1) The de	erivatives of X is 1				,	2,U)
2) The sum of principal and interest is called amount3) Simple interest is greater than compound interest						,U) ,U)
	I form of EMI is eq			nt.	(CO :	
	tation is the arrang				(CO1	· ·
	all the elements of				(CO2	,U)
7) In 2 x 2 matrices when the elements are 1 0 0 1 it is called identity matrices.						,U)
	lue of 4! is 24. R/100 is formula fo	or Simple intere	est.		(CO1 (CO1	
	on has given forwa				(CO2	A

Q2) (A) If an Amount doubles itself in 4 years, then find the rate of simple interest.(CO3,A) 8M Q2) (B) Mr. Ram invested Rs. 25000, for 5 years @ 12%p.a.c.i. find the accumulated value of annuity if interest compounded quarterly and monthly. (CO1,3,A,R) 7M

OR

Q2) (C) Find the Total profit if the cost function for x items produced is $C=20+10X-x^3$ and Revenue function is $R=400x-x^3$, when x=4.

Q2) (D) there are 6 boys and 5 girls in the group if 2 boys and 3 girls are selected find the number of such (CO1,2,A) 7M

groups.
Q3) (A) Find A x B, if
$$A = \begin{bmatrix} 4 & 6 & 8 \\ 6 & 5 & 3 \\ 5 & 4 & 6 \end{bmatrix}$$
 $B = \begin{bmatrix} -4 & 3 & 2 \\ 5 & -4 & 3 \\ 3 & 2 & -4 \end{bmatrix}$

Q3) (B) Expand
$$A = \begin{bmatrix} a & b & c \\ B & c & a \\ C & a & b \end{bmatrix}$$
 (CO2,R,U) 7M

Q3) (C) If
$$A = \begin{bmatrix} 5 & 7 \\ 4 & 9 \end{bmatrix}$$
 $B = \begin{bmatrix} 6 & 8 \\ 4 & 3 \end{bmatrix}$ find $2A + 3B + I$. (CO1,2,A)

Q3) (D) Solve the following equations simultaneously using Cramer's rule. x+2y+z=6, 2x-2y+z=1, -x+2y-2z=5 (CO1,2A)

Q4) (A) Find dy/dx of Y = $(4X + 5) (7x^2 + 4)$ by product rule.(CO1,2,A) 8M

Q4) (B) If the cost function is given by C = 4x2+5x+8, find TC, AC, MC when x = 4. (CO2, A) 7M

OR

Q4) (C) Price and Supply for a certain commodities in a retail shop is as follows. Estimate the supply when price was Rs. 15 using NFIF

(CO1,2,) 8M

	12	16	20		24
Price	56	60	68	1	72
Supply	Journal diff				(CO1,2,A) 7M

Q4) (D) find Newtons forward difference table.

17	1 2	1 1	0	1	2	3
X	-2	3847	2704	2571	3448	3333

Q5) Write Short Notes (Any 3)

- 1) Distinguish between Simple interest and Compound interest (CO3,R)
- 2) Types of matrices (CO1,R)
- 3) Permutation and Combination (CO2,R)
- 4) EMI and types with formula's (CO3,R,U)
- 5) Annuity and types of annuities (CO1,3, R,U)

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(CO1,2,A,R)8M