

Seat Number :- _____

Duration : 3.00 Hours

FYBMS - D217A23BM (11)

Marks : 80

Note : 1. All questions are compulsory.

2. Figures to the right indicate marks.

3. Use of Simple calculator is allowed.

Q1) (A) Select the right answer from the following Multiple choice questions. (Any 8) 8 M

- 1) In revenue function p is equal to _____ (CO1,R)
 - A) AR
 - B) MR
 - C) MAC
 - D) MAR
- 2) Derivatives of $100x$ will be _____ (CO2 ,R)
 - A) 1
 - B) 0
 - C) x
 - D) 100
- 3) The derivatives of $y = 4x^2 + 4$ is always _____ (CO1 ,R)
 - A) 16
 - B) 20
 - C) 0
 - D) $8x$
- 4) A square matrix, having all non-diagonal elements zero and all diagonal elements with value 1 is called
 - (a) Scaler matrix
 - (b) Unit matrix
 - (c) Diagonal matrix
 - (d) Square matrix (CO1 ,R)
- 5) A ----- is an arrangement of all or part of a set objects in a definite order.
 - (a) Permutation
 - (b) Function
 - (c) Combination
 - (d) Factorial (CO2 ,R)
- 6) Find the future value of Rs. 30,000 kept in a fixed deposit account, after 6 years at 8% rate of compound interest p.a.
 - A) 47,600
 - B) 30,000
 - C) 44,400
 - D) 35,000 (CO3 ,R)
- 7) In how many years a sum of Rs. 50,000 will amount to Rs. 60,000 at 10% simple interest?
 - A) 4 years
 - B) 1.5 years
 - C) 2 years
 - D) 1 year (CO3,R)
- 8) If the annuities are paid at the end of each period, it is known as an _____ (CO1,R)
 - A) Immediate Annuity
 - B) Life Annuity
 - C) Annuity Certain
 - D) Annuity Due
- 9) $5!/2! =$ _____ (CO2 ,R)
 - A) 120
 - B) 20
 - C) 30
 - D) 60
- 10) $0! =$ _____ (CO1,R)
 - A) 1
 - B) 0
 - C) 100
 - D) 10

Q1) (B) State whether the following statements are True or False. 7M

- 1) The derivatives of X is 1 (CO 2,U)
- 2) The sum of principal and interest is called amount (CO1 ,U)
- 3) Simple interest is greater than compound interest (CO3 ,U)
- 4) The full form of EMI is equated to a monthly installment. (CO 1,U)
- 5) Permutation is the arrangement of objects in a line or circle. (CO1 U,)
- 6) When all the elements of the Matrix are zero it is called the null Matrix. (CO2 ,U)
- 7) In 2×2 matrices when the elements are 1 0 0 1 it is called identity matrices. (CO1 ,U)
- 8) The value of $4!$ is 24. (CO1,R)
- 9) $I = PNR/100$ is formula for Simple interest. (CO1,R)
- 10) Newton has given forward difference formula. (CO2 ,R)

