

2017

(5th Semester)

COMMERCE

Paper No. : BC-503

(Business Mathematics and Computer Application)

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—I

(Marks : 15)

1. Fill in the blanks : 1×5=5

(a) The number of rows and columns of a determinant should always be

.....

(b) In a matrix, if $AB = BA$, it is known as

.....

(2)

(c) The method of obtaining the derivative of a composite function is known as

.....

(d) computer uses binary codes 0 and 1 to represent the information.

(e) is India's telecom gateway to the world.

2. Indicate whether the following statements are True (T) or False (F) by putting a Tick (✓) mark :

1×5=5

(a) Sarrus method is used for all types of order.

(T / F)

(b) The diagonal of a skew-symmetric matrix is zero.

(T / F)

(3)

(c) The method of finding the derivative function applying the definition of derivative also known as delta method.

(T /

(d) ALU stands for Arithmetic and Logic Unit.

(T /

(e) Train topology is one of the most commonly used topologies in multinational organizations.

(T /

3. Tick (✓) the correct answer in the brackets provided

(a) Determinant is a method which is used by

(i) business organizations (.)

(ii) economists ()

(iii) Both (i) and (ii) ()

(iv) None of the above ()

(b) A matrix is orthogonal, if

(i) $A'A = I$ ()

(ii) $A^2 = A$ ()

(iii) $A'A = A$ ()

(iv) $A = 0$ ()

(c) E-service can be defined as

(i) $E\text{-service} = E\text{-commerce} + E\text{-business}$ ()

(ii) $E\text{-service} = E\text{-commerce} - E\text{-business}$ ()

(iii) $E\text{-service} = E\text{-commerce} \times E\text{-business}$ ()

(iv) $E\text{-service} + E\text{-commerce} = E\text{-business}$ ()

(d) A tree topology combines the characteristics of

(i) bus and star ()

(ii) bus and hybrid ()

(iii) ring and bus ()

(iv) ring and star ()

(e) When a variable is changed by differentiation keeping other variables constant, it is known as

(i) partial derivative ()

(ii) chain rule ()

(iii) Euler's theorem ()

(iv) division method ()

(5)

SECTION—II

(Marks : 10)

4. Answer the following questions :

(a) Write any two properties of determinant.

(6)

(b) Construct an $m \times n$ matrix.

(7)

- (c) Calculate the average revenue function at $q = 5$, for the total revenue function, $R = 15 + 10q + q^2$.

(8)

(d) Explain any two harmful effects of a computer.

(9)

(e) What do you mean by a binary number system?
