

2021

(5th Semester)

COMMERCE

Paper No. : BC-503

(Business Mathematics and Computer Applications)

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—I

(Marks : 15)

1. Indicate whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark : $1 \times 5 = 5$

(a) Matrices are now-a-days applied in all disciplines.

(T / F)

(b) The concept of limit is the base of calculus.

(T / F)

(2)

(c) Binary number system uses 10 as base.

(T / F)

(d) The derivative of a constraint function is zero.

(T / F)

(e) The fifth generation of computers is working on the concept of Artificial Intelligence.

(T / F)

2. Choose the correct answer and place its code in the brackets provided : $1 \times 10 = 10$

(a) The value of $\begin{vmatrix} 2 & 4 \\ 5 & 6 \end{vmatrix}$ is

(i) 8

(ii) -8

(iii) -2

(iv) 2

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(3)

(b) A square matrix is said to be singular, if $|A|$ is equal to

(i) zero

(ii) 1

(iii) -1

(iv) None of the above

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(c) The co-factor of a_{12} in $\begin{vmatrix} 2 & 5 \\ 6 & 7 \end{vmatrix}$ is

(i) +6

(ii) -6

(iii) +7

(iv) -7

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(d) The derivative of x^n is

(i) x^{n-1}

(ii) nx^{n-1}

(iii) $\frac{1}{x^n}$

(iv) zero

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(4)

(e) A BYTE is a group of

- (i) 4 bits
- (ii) 6 bits
- (iii) 8 bits
- (iv) 10 bits

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(f) A personal computer is categorized in

- (i) mini computer
- (ii) microcomputer
- (iii) mainframe computer
- (iv) supercomputer

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(g) Which of the following is machine-independent program?

- (i) High Level Language
- (ii) Low Level Language
- (iii) Assembly Language
- (iv) Machine Language

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(5)

(h) Which of the following types of computer is the fastest?

- (i) Mini computer
- (ii) Microcomputer
- (iii) Mainframe computer
- (iv) Supercomputer

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(i) The translator program used in assembly language is called

- (i) compiler
- (ii) interpreter
- (iii) assembler
- (iv) translator

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(j) OS stands for

- (i) Open Software
- (ii) Optical Sensor
- (iii) Operating System
- (iv) Ordered Software

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(6)

SECTION—II
(Marks : 10)

3. Answer/Write on the following (any five) : $2 \times 5 = 10$

(a) Distinguish between LAN and WAN.

(7)

(b) Shortcomings of online shopping

(8)

(c) Evaluate the limit of

$$\lim_{x \rightarrow 3} \frac{x^2 - 2x - 3}{x - 3}$$

(9)

(d) State any two properties of determinants.

(10)

(11)

(e) Identity matrix

(f) Operating system

(g) Euler's theorem
