



## BRAINWARE UNIVERSITY

Term End Examination 2023-2024  
Programme – B.Sc.(BT)-Hons-2021  
Course Name – Computer Application  
Course Code - BBTD501C  
( Semester V )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

(i) Which of the following computer bus connects the CPU to a memory on the system board?

- a) Expansion Bus
- b) width bus
- c) system bus
- d) none of these

(ii) Identify the following is not a valid C variable name?

- a) int number;
- b) float rate;
- c) int variable\_count;
- d) int \$main;

(iii) Which of the following is the function of the control unit in the CPU?

- a) It stores program instruction
- b) It decodes program instruction
- c) It performs logic operations
- d) None of the above

(iv) Which of the following is used for binary multiplication?

- a) Restoring Multiplication
- b) Booth's Algorithm
- c) Pascal's Rule
- d) Digit-by-digit multiplication

(v) Which of the following logic families has the shortest propagation delay?

- a) CMOS
- b) BiCMOS
- c) ECL
- d) 74SXX

(vi) Number of minterms will be there for three variables (a,b,c)

- a) 0
- b) 2
- c) 8
- d) 1

(vii) A product term containing all K variable of the functions in their complemented or uncomplemented form is called a

- a) Minterm
- b) Maxterm
- c) Midterm
- d)  $\Sigma$ term

- (viii) Produce the output of  $(A + B)(A' * B') = ?$
- a) 1  
b) 0  
c) AB  
d)  $AB'$
- (ix) The expression for Absorption law is given by \_\_\_\_\_
- a)  $A + AB = A$   
b)  $A + AB = B$   
c)  $AB + AA' = A$   
d)  $A + B = B + A$
- (x) The main virtue for using single Bus structure is \_\_\_\_\_
- a) Fast data transfers  
b) Cost effective connectivity and speed  
c) Cost effective connectivity and ease of attaching peripheral devices  
d) None of the mentioned
- (xi) The small extremely fast, RAMs are called as \_\_\_\_\_
- a) cache  
b) hip  
c) accumulator  
d) heap
- (xii) Write the output device which is used to display visual output to the user?
- a) Printer  
b) Monitor  
c) Keyboard  
d) Mouse
- (xiii) What is the value of n in multiplication of  $110 * 1000$ ?
- a) 2  
b) 3  
c) 4  
d) 0
- (xiv) Where is the decoded instruction stored?
- a) Register  
b) MDR  
c) PC  
d) IR
- (xv) Where is the document temporarily stored during working on a document on PC?
- a) ROM  
b) CPU  
c) RAM  
d) FLASH MEMORY

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain De-Morgan's theorem. (3)
3. Define Super Computer? (3)
4. Explain for loop. (3)
5. Differentiate between Multicomputer and Multiprocessor. (3)
6. Explain, Can a C program be compiled or executed in the absence of a main()? (3)

OR

- Explain C Token? (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. characteristics of primary memory & secondary memory. (5)
8. Evaluate the following expressions using K-map: (i)  $F = \sum m(0,1,3,5,6,11,15)$  (5)
9. Calculate  $7 \times 3$  using Booth's multiplication algorithm (5)
10. Explain Computer Memory? Briefly Discuss about them? (5)
11. Distinguish between while loop and do..while loop. (5)
12. What Is an ALU & explain its work? (5)

OR

- Adding of the positive value with a negative value when the negative number has a higher magnitude. 1101 and -1110 (5)