BRAINWARE UNIVERSITY

Term End Examination 2022
Programme – BCA-2019/BCA-2020/BCA-2021
Course Name – Computer Application and Hardware
Course Code - BCAC102
(Semester I)

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)   The file extension of MS-Word 2010 is stated to be

   a) .pdf   b) .docx
   c) .doc   d) .txt

(ii)   Microsoft Word is an example of -

   a) Operating System   b) System Software
   c) Processing device   d) Application Software.

(iii) The file extension of MS-Word 2010 is -

   a) .pdf   b) .docx
   c) .doc   d) .txt

(iv) Windowing system of UNIX is also known as

   a) X window system   b) Red Hat
   c) LINUX   d) DOS

(v)   In MS-DOS 6.22which part identifies the product uniquely?

   a) 6.22   b) DOS
   c) MS   d) MS-DOS

(vi) The command to display system date in MS-DOS is -

   a) Date command   b) Ver command
   c) Disk command Format   d) command

(vii) Boolean algebra can be used to

   a) Simplify any algebraic expression   b) Solve the mathematical problem
   c) Minimize the number of switches in a circuit   d) Perform arithmetic calculations

(viii) The OR operation performs in Boolean algebra by

   a) Associative properties   b) Commutative properties
   c) Distributive properties   d) All of these

(ix) Canonical form is a unique way of representing

    a) SOP   b) Minterm Boolean
    c) expression   d) POS

(x) The logic circuits whose outputs at any instant of time depends only on the present input but also on the past outputs are called _____.

    a) Combinational circuit   b) Sequential circuits(
    c) Latches   d) Flip-flops

(xi) The basic R-S flip-flop is

    a) A monostable multivibrator   b) A bistable multivibrato
    c) An astable multivibrator   d) A Schmitt trigger

(xii) When two 16-input multiplexers drive a 2-input MUX, what is the result we can see?

    a) 2-input MUX   b) 32-input MUX
    c) 24-input MUX   d) 62-input MUX

(xiii) One multiplexer can take the place of

    a) Several SSI logic gates(b) Combinational logic circuits
    c) Several Ex-NOR gates   d) Several SSI logic gates or combinational logic circuits

(xiv) The inputs/outputs of an analog multiplexer/de-multiplexer are always

    a) Bidirectional   b) Unidirectional
    c) Even parity   d) Binary-coded decimal

(xv) Which of the following circuits come under the class of combinational logic circuits? Case-1. Full adder Case- 2. Full subtractor Case- 3. Half adder Case- 4. J-K flip Case- 5. Counter

    a) 1 only   b) 3 and 4
    c) 4 and 5   d) 1,2 and 3

Group-B
(Short Answer Type Questions)   3 x 5=15

2. What are Microsoft DOS and Windows Command Line? (3)
3. Explain the working principle of the EXNOR gate with necessary examples. (3)
4. What's the difference between MUX and Encoder? (3)
5. Explain the limitation of RS flipflop, and also explain the possible solution to overcome the limitations. (3)
6. What are the advantages of the Hexadecimal number system over octal? also, Convert decimal 14.625 in the Octal number system. (3)

OR

What is gate equivalence? Explain gate equivalence with proper examples (3)

Group-C
(Long Answer Type Questions)   5 x 6=30

7. Can the encoder be called a multiplexer? (5)
8. Write down the function of aligning text left, aligning text right, aligning center, and aligning justify in MS Word. (5)
9. list the commands, that are the same in MS-DOS & UNIX. (5)
10. F(A,B,C,D)=A' C'+ABCD'+B' C' D+BCD'+A'B' (simplify with K map) (5)
11. What are counter circuits used for? (5)
12. Differentiate RS and JK flipflop with proper circuit diagrams. (5)

OR

What are counters and registers, explain differences between them? (5)