2025/12

SET A

BACHELOR OF COMPUTER APPLICATION
FIRST SEMESTER
COMPUTER FUNDAMENTALS
BCA-MDC-913

[USE OMR FOR OBJECTIVE PART]

Duration: 2 hrs. **Full Marks: 50**

Objective

Time: 20 min. **Marks: 15**

Choose the correct answer from the following: *1X15=15*

1. The main feature of 3rd generation of computer is
   a. Vacuum Tube b. Transistor
   c. IC d. AI

2. Which of the following language is easily understood by humans?
   a. Low-level language b. high-level language
   c. Both d. None

3. Debugging is easy in
   a. Low-level language b. high-level language
   c. Both d. None

4. Which of the following is not an operating system?
   a. Linux b. IOS
   c. Oracle d. Windows

5. In which of the following topology, a central device is used?
   a. BUS b. RING
   c. STAR d. None

6. Which network topology allows sending private messages?
   a. BUS b. RING
   c. STAR d. MESH

7. LAN's ownership is
   a. Private b. Public
   c. Both d. None

8. The propagation delay in MAN is
   a. Short b. Moderate
   c. Long d. All of these

9. The binary form of decimal 7 is
   a. 101 b. 110
   c. 111 d. 011

10. The hexadecimal form of the binary number 11111011 is
    a. A3 b. AF
    c. FA d. FB

11. Which logic gates are used in a half adder?
    a. AND and OR b. OR and NOT
    c. NAND and NOR d. XOR and AND

12. Which of the following is an input device?
    a. Monitor b. Scanner
    c. Printer d. Speaker

13. The ALU is a part of
    a. Memory unit b. Control Unit
    c. Central Processing Unit d. Output Unit

14. The 2's compliment of the number 10101101 is
    a. 01010010 b. 11010010
    c. 01010011 d. 11101111

15. Which of the following is an example of application software?
    a. Windows 10 b. MS Word
    c. BIOS d. Linux

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Descriptive

Time : 1 hrs. 40 min. **Marks : 35**

[Answer question no.1 & any three (3) from the rest]

1. Define Network topology? Explain Mesh topology of network with the help of diagram. 5

2. What is an Operating System? Discuss the functions and types of operating system. 2+4+4=10

3. **Perform the following operations:** 2.5×4=10
   a. Convert $(100)_{10}$ into Binary.
   b. Convert $(1010.110)_2$ into Decimal.
   c. Subtract $(10)_{10}$ from $(15)_{10}$ in 1's compliment method.
   d. Subtract $(12)_{10}$ from $(14)_{10}$ in 2's compliment method.

4. What do you mean by Computer language? Discuss various types of Computer Language. 2+8=10

5. Explain with the help of diagram the architecture of computer. 10

6. a. Differentiate between flowchart and algorithm. 5+5=10
   b. Write short notes on Half-adder.

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