BCA11 — DIGITAL LOGIC AND PROGRAMMING IN C

Time : Three hours   Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Find 9's and 10's complement of 85.

2. What is Gray code?

3. Define Multiplexer.

4. What is called Register?

5. What is Constant?

6. Differentiate Exit control loop and Entry control loop.

7. What do you mean by Array?

8. Define Recursion.

9. What is Pointer?

10. Mention the use of Command Line arguments.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Convert the folloiwng

    (i) Octal to decimal — $(12.2)_8$

    (ii) Decimal to octal — $(10.25)_{10}$

    Or

    (b) Give an account of Excess – 3 code.

12. (a) Discuss in detail about Multiplexer.

    Or

    (b) Draw and explain the principal of JK flip-flop.

13. (a) Explain switch statement with example.

    Or

    (b) Explain the syntax for FOR loop statement.

14. (a) Discuss in detail about Structures.

    Or

    (b) Explain call by value and call by reference method.

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15. (a) Describe pointers with example.

    Or

    (b) Discuss on Error handling during I/O operation.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Reduce $F(A,B,C,D) = \sum (0,1,2,4,5,7,10,15)$ using K–map.

17. Discuss Half adder with neat sketch.

18. Explain different types of Operators in C.

19. Describe the types of Arrays.

20. Summarize on I/O operations on files.

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