

NOVEMBER/DECEMBER 2019

**BSC11 — DIGITAL LOGIC AND  
PROGRAMMING IN C**

Time : Three hours

Maximum : 75 marks



**SECTION A — (10 × 2 = 20 marks)**

Answer ALL questions.

Convert gray code(1010111)g to binary.

2. Draw a Logic Symbol of NOR Gate.
3. What is Subtractor? With examples.
4. What is Pair on K-Map?
5. What is Arithmetic Operator? With examples.
6. Define Structure.
7. Write a syntax for If-Else Statement.
8. What is meant by One dimensional Arrays?
9. What is Pointers?
10. What are the I/O Files?

SECTION B — ( $5 \times 5 = 25$  marks)

Answer ALL questions.

11. (a) Perform the following subtractions using 9's Complement:

(i) 18-06

(ii) 38-24.

Or

- (b) Explain BCD and Excess-3 codes with examples.

12. (a) Explain about NAND as Universal building Process.

Or

- (b) Describe the Shift Registers.

13. (a) Difference between While and do-while Statements.

Or

- (b) State the Break and Continue Statement with examples.

14. (a) What is Recursion? Explain.

Or

- (b) Explain about the common operation performed on Character string.

15. (a) Write a note on Input output file operations.

Or

- (b) Explain about Array of pointers with examples.

SECTION C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions.

16. Convert the decimal number 4096 into the following codes:

(a) Binary (b) BCD (c) Excess-3 (d) Octal.

17. Explain the functions of Half and Full Sub tractors.

18. Describe the various types of constants in C.

19. Briefly and explain the Storage classes.

20. Explain about the Error handling I/O Operations.