

**GSE/D-21**

**1195**

**PROGRAMMING IN C**

**Paper-BCA-116**

Time : Three Hours]

[Maximum Marks : 80

**Note :** Q. No. 1 is compulsory. In addition, attempt four more questions selecting exactly *one* question from each unit. All questions carry equal marks.

**Compulsory Question**

1. (a) What is a symbolic constant in C?
- (b) Out of printf() and puts(), which statement is better for output of a string?
- (c) Can one type of data be converted into another? Give an example.
- (d) Comment on the purpose of default case in switch statement.
- (e) What is the purpose of continue statement?
- (f) What is meant by prototype of a function?
- (g) Which storage type is considered as default?
- (h) How can you pass an array to a function? (8×2=16)

**UNIT-I**

2. (a) Describe the various rules for naming of an identifier. (8)

(b) What is the difference between formatted and unformatted I/O statements? Explain using suitable examples. (8)

3. (a) Explain the history and importance of C language. (8)
- (b) Explain the various format specifiers that can be used in scanf() and printf(). Also describe the escape sequence that are commonly used in printf() function. (8)

## UNIT-II

4. (a) What do understand by unary, binary & ternary operators in 'C' ? Explain with examples. (9)
- (b) Which of the following arithmetic expressions are valid? If valid, give the value of the expression; otherwise give reason.
- (i)  $25/3\%2$ .
  - (ii)  $+9/4+5$ .
  - (iii)  $7.5\%3$ .
  - (iv)  $21\% (\text{int})4.5$ .
  - (v)  $(5/3)*3+5\%3$ . (7)
5. (a) Write a program in 'C' to swap the values of two variables without the use of third variable. (8)
- (b) Describe the IF statement and its variations using suitable examples in C. (8)

### UNIT-III

6. (a) Write a program in 'C' to generate first n prime numbers. (8)
- (b) What is prototyping? Why is it necessary? (4)
- (c) Differentiate between actual & formal arguments. (4)
7. (a) Write a program in 'C' to display the all integers greater than 100 and less than 200 that are divisible by 7. (8)
- (b) What is recursion? Explain using appropriate examples. (8)

### UNIT-IV

8. Distinguish between the following :
- (i) Global and Local Variables.
- (ii) Automatic and Static Variables.
- (iii) Scope and Visibility of variables
- (iv) One-dimensional and Two-dimensional Array. (16)
9. Write a program in 'C' to search a number from a given list of numbers. (16)
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