

**PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2022  
(First Semester)**

**Branch – COMPUTER SCIENCE**

**PROBLEM SOLVING AND PROGRAMMING IN C**

Time: Three Hours

Maximum: 50 Marks

**SECTION-A (5 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

1. All keywords in C are in \_\_\_\_\_
  - (i) LowerCase letters
  - (ii) UpperCase letters
  - (iii) CamelCase letters
  - (iv) None of the mentioned
2. What is an example of iteration in C?
  - (i) for
  - (ii) while
  - (iii) do-while
  - (iv) all of the mentioned
3. Functions in C Language are always \_\_\_\_\_
  - (i) Internal
  - (ii) External
  - (iii) Both Internal and External
  - (iv) External and Internal are not valid terms for functions
4. Which of the following uses structure?
  - (i) Array of structures
  - (ii) Linked Lists
  - (iii) Binary Tree
  - (iv) All of the mentioned
5. stdout, stdin and stderr are \_\_\_\_\_
  - (i) File pointers
  - (ii) File descriptors
  - (iii) Streams
  - (iv) Structure

**SECTION - B (15 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6. a) Comment on analysis of an algorithm.  
(or)  
b) Write a program to find reverse the digits of an integer.
7. a) Explain data types and its types.  
(or)  
b) Discuss about the conditional operator.
8. a) Differentiate gets and puts function.  
(or)  
b) Illustrate switch statement.
9. a) State and explain the use of global variables?  
(or)  
b) Give the significance of NULL character.
10. a) How to open a file? Explain.  
(or)  
b) Illustrate on union.

Cont...

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a Write a program to calculate factorial value for given N number.

OR

b Explain top down design.

12 a Write a program to generate prime numbers.

OR

b Discuss about operators and its types.

13 a Brief about looping and explain it.

OR

b Explain in detail about multi dimensional arrays.

14 a Illustrate on passing arguments to a function.

OR

b Describe the need for string functions.

15 a Discuss about structures.

OR

b Give the working principles of array of pointers.

Z-Z-Z

END