PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Second Semester)

Branch – **MATHEMATICS WITH COMPUTER APPLICATIONS**

PROGRAMMING IN C

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 1 = 10)

1 The execution of a C program start from _____.
(i) function (ii) header file
(iii) main() (iv) processor

2 The C program is converted to machine language using _____.
(i) an assembler (ii) a compiler
(iii) an interpreter (iv) an operating system

3 The programs should be written only in _____.
(i) lower case (ii) upper case
(iii) title case (iv) sentence case

4 The extension of C program files by default is _____.
(i) .c (ii) .d
(iii) .obj (iv) .exe

5 A short integer variable occupies memory _____.
(i) 2 bytes (ii) 4 bytes
(iii) 1 byte (iv) 8 bytes

6 The range of character data type is _____.
(i) -128 to 127 (ii) 0 to 255
(iii) 0 to 32767 (iv) 126 to 275

7 What is the value of 10%8?
(i) 8 (ii) 2
(iii) 1 (iv) 0

8 What is the result of the expression (10/3)*3+5%3?
(i) 11 (ii) 10
(iii) 8 (iv) 1

9 Which function is appropriate for accepting a string?
(i) gets() (ii) getch()
(iii) getche() (iv) scanf()

10 An array is a collection of _____.
(i) different data types (ii) same data types
(iii) different data types (iv) only one data type

SECTION - B (25 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 5 = 25)

11 a Classify the arithmetic, logical and relational operators give examples.

OR

b Sketch the concept of constant and the types of constants.

12 a State the concept of constant and the types of constants.

OR

b Describe the different forms of if statement in C.

13 a How are the one-dimensional array elements read and written? Explain.

OR

b Bring out the operations performed on strings with examples.

14 a Where are structures useful in C? Explain.

OR

b Summarise the advantages of pointers in C.

15 a Write a C program to calculate average of N numbers.

OR

b Explain the uses of bitwise operations in C.

SECTION -C (40 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 8 = 40)

16 a Categorize the four basic data types with simple examples.

OR

b Write a C program to find the largest and smallest among given N numbers.

17 a Compare the while structure with the do-while structure.

OR

b Justify the general form of the "for" structure in C. Explain its functions with examples.

18 a Develop a C program to find the factorial of a given number using recursion function.

OR

b Write a C program to arrange the given set of numbers in both ascending and descending order using pointer.

19 a Distinguish between the Structure and Unions.

OR

b Analyze the limitation of array of pointers to strings.

20 a Write a C program that copies one file to another, replacing all lower characters by their upper case equivalents.

OR

b Outline the steps to creating and opening a file in C.

Z-Z-Z END