PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2022
(Fifth Semester)

Branch – MATHEMATICS

DISCIPLINE SPECIFIC ELECTIVE – I : C PROGRAMMING

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (10 x 1 = 10)

1. The Trigraph sequence ??< is translated as
   (i) # number sign   (ii){ left brace
   (iii)} right brace   (iv)| vertical bar

2. The character constant '\a' equals to
   (i) audible alert (bell)   (ii) carriage return
   (iii) form feed   (iv) back space

3. A ternary operator pair is represented as
   (i) "? /"   (ii) "? \"   (iii) "? :"   (iv) "? ;"

4. In relational operation, > is complement of
   (i) >=   (ii) !=   (iii) <=   (iv) ==

5. C language has a built-in multiway decision statement called_____.
   (i) GOTO statement   (ii) switch statement
   (iii) IF statement   (iv) IF....ELSE statement

6. Conversion specifier is used to print a signed decimal integer
   (i) %u   (ii) %i   (iii) %g   (iv) %x

7. An array index starts with
   (i)-1   (ii) 0   (iii)1   (iv)2

8. In the statement for(; ;);
   (i) for loop works exactly the first time   (ii)for loop works infinite number of times
   (iii) gives a compile error   (iv)none of the above

9. The default parameter passing mechanism is _____
   (i) call by value   (ii) call by refernece
   (iii) call by error   (iv) call by result

10. Function is used to read an integer from a file.
    (i) getw()   (ii) gets()   (iii) fread()   (iv) fscanf()

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

11. a. Explain about tokens in C language.
    (OR)
    b. Outline the rules for declaring variables with example.

12. a. Develop a C program to convert a given number of days into months and days.
    (OR)
    b. Summarise the rules for evaluating expressions.

13. a. Develop a C program that reads a character from keyboard and then prints it in reverse case.
    (OR)
    b. Narrate about formatted input and output functions with examples.

14. a. Develop a C program to find the factorial of a given number.

(OR)

b. Summarise the concepts of one-dimensional arrays.

15. a. Describe the form of a C function.

(OR)

b. How will you declare and initialize a pointer variable?

SECTION -C (40 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 8 = 40)

16. a. Analyze the various data types of C language.

(OR)

b. Discuss the types of constants supported by C language.

17. a. Discuss in detail about the different types of C operators.

(OR)

b. Create a C program to compute a sales-person's gross salary with fields base salary, bonus rate and commission.

18. a. Discuss about nested if- else statement with example.

(OR)

b. Write a C program that prints the mark list of a student. Use the following table for computing grade.

Average Marks	Grade
80 to 100	Honours
60 to 79	First Division
50 to 59	Second Division
40 to 49	Third Division
0 to 39	Fail

19. a. Highlight the importance of various looping statements.

(OR)

b. Create C program to display the given set of numbers in ascending order.

20. a. Classify the various categories of functions.

(OR)

b. Enumerate about various Input / Output operations on files.

Z-Z-Z   END