PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch –   **COMPUTER SCIENCE**

PROBLEM SOLVING USING PROGRAMMING

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1. A flowchart is a _____ representation of an algorithm using various symbols, shapes, and arrows to explain a process or programme.
   (i) Graphical   (ii) Visual
   (iii) Both (i) and (ii)   (iv) None of the above

2. Who is the father of C language?
   (i) Steve Jobs   (ii) James Gosling
   (iii) Dennis Ritchie   (iv) Rasmus Lerdorf

3. Which is valid C expression?
   (i) int my_num = 100,000;   (ii) int my_num = 100000;
   (iii) int my num = 1000;   (iv) int $my_num = 10000;

4. Which of following is not accepted in C?
   (i) static a = 10; //static as
   (ii) static int func (int); //parameter as static
   (iii) static static int a; //a static variable prefixed with static
   (iv) all of the mentioned

5. Which option should be selected to work the following C expression?
   String p="HELLO";
   (i) typedef char [] string;
   (ii) typedef char *string;
   (iii) typedef char [] string; and typedef char *string;
   (iv) Such expression cannot be generated in C

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6. a) How to define a Algorithm? Explain.
               (OR)
   b) Summarise on Programming language.

7. a) Analyse characters that comprise the C character sets.
               (OR)
   b) How can be label data items be generated by the printf function? Explain.

8. a) What are Subscripts? Illustrate.
               (OR)
   b) State the advantages to use the Functions.

9. a) Compare structure and an array.
               (OR)
   b) Bring out the advantages of using a Data file.

10. a) Show the method of Opening a file in C.
      (OR)
    b) What is the C pre-processor? Explain

SECTION -C (30 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 6 = 30)

11. a) Discuss about pseudo code.
      (OR)
    b) Illustrate the execution of C program.

12. a) Categorise the types of Operators.
      (OR)
    b) Explain the Decision Control statements with an example.

13. a) How are individual array elements identified?Explain.
      (OR)
    b) Summarise Dynamic memory allocation.

14. a) Point out the relationship between a Structure member and a Structure.
      (OR)
    b) Highlight the purpose of the fclose function.

15. a) Develop a C program for reading a Data file.
      (OR)
    b) Explain about Enumerated Data types with an example.

Z-Z-Z   END