PROBLEM SOLVING AND COMPUTER PROGRAMMING USING C

Time: Three Flours   Maximum: 75 Marks

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

Choose the best answer:

1   _____ is the highest computational cost in terms of problem size n.
   (i) $\log_2 n$ (ii) n
   (iii)   nlogn   (iv) 2^n

2   Individual modules in _____ approach do not require much communication.
   (i)   Structured   (ii) Testing
   (iii)   Top Down   (iv) Bottom Up

3   _____ helps in allocation of memory to variables.
   (i)   Identifier   (ii) Declaration
   (iii)   Deletion   (iv) Insertion

4   _____ can be used both as a binary and unary operator svmbol.
   (i) ~   **00 if**
   (iii) ?:   (iv) <

5   _____statement is used to terminate a loop.
   (i) continue   (ii) break
   (iii) goto   (iv) if

6   _____ storage class has garbage value as initial value.
   (i)   static   (ii) dynamic
   (iii)   global   (iv) register

7   Pointer variable is used to store_____ of another variable.
   (i)   Value   (ii) address
   (iii)   array   (iv) string

8   When an array is passed to a function, the call is_____ by default.
   (i)   Call by value   (ii) Call by reference
   (iii)   Direct Recursion   (iv) Indirect recursion

9   All elements of_____ occupy same memory location.
   (i)   string   (ii) structure
   (iii)   array   (iv) union

10   _____ is bitwise right shift operator.
   (i)   « (ii) » (iii) <   (iv) >

SECTION - B (25 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks (5 x 5 - 2 5)

11 a I low are loops constructed in a program?
OR
b How can redundant calculations in a program be avoided? Give examples.

12 a List and explain the tokens in C++ with their uses.

OR

b Show the syntax of conditional operator. Explain its use with examples.

13 a Compare and control the storages classes of C++.

OR

b How are arguments passed to function in C++?

14 a Summarise on multidimensional arrays.

OR

b How is dynamic memory allocation done with pointers? Explain.

15 a Compare Structure and Union.

OR

b Describe bitwise operations in C.

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

16 a Examine the exchange sort algorithm.

OR

b Elucidate the text line length adjustment algorithm.

17 a With example program snippets, examine symbolic constants and logical operators in C.

OR

b Discuss the different types of Operators in C.

18 a What are the different forms of control structures in C? Explain with program segments.

OR

b Infer recursion with examples.

19 a Elucidate string manipulation in C.

OR

b Summarise array of pointers and passing pointer to a function.

20 a Analyze how a data file is processed?

OR

b Discuss enumerated data types and command line arguments.

Z-Z-Z   END