PROBLEM SOLVING AND COMPUTER PROGRAMMING USING C

Time: Three Hours   Maximum: 75 Marks

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

Choose the best answer:

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

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

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

_____ can be used both as a binary and unary operator svmbol.
(i) •   (ii) if
(iii)   (iv) <

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

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

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

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

All elements of _____ occupy same memory location,
(i) string   (ii) structure
(iii) array   (iv) union

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

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

11 a How 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