2019

(CBCS)

(6th Semester)

MATHEMATICS

TWELFTH (C) PAPER

(Computer Programming in C)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(*Marks* : 23)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 8)

Put a Tick ☑ mark against the correct alternative in the box provided : 1×8=8

1. The number of keywords available in C is

(a) 30 ☐

(b) 31 ☐

(c) 32 ☐

(d) 33 ☐

2. Suppose a 14 and b 4, what will be the result of a % b?

(a) 1 ☐
(b) 2 ☐
(c) 3 ☐
(d) 4 ☐

3. Every C programming must contain only one

(a) printf() function ☐
(b) exit() function ☐
(c) scanf() function ☐
(d) main() function ☐

4. Continue statement is used

(a) to go to the next iteration in a loop ☐
(b) to come out of the loop ☐
(c) to exit and return to the main function ☐
(d) to restart iteration from the beginning of a loop ☐

5. An array is the collection of

(a) different data types scattered throughout the memory ☐
(b) the same data type scattered throughout the memory ☐
(c) the same data type placed next to each other in memory ☐
(d) different data types placed next to each other in memory ☐

6. int testarray [3][2][2] {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12}

What values does testarray [2][1][0] in the sample code above contain?

(a) 5 ☐
(b) 7 ☐
(c) 9 ☐
(d) 11 ☐

7. What is the similarity among structure, union and enumeration?

(a) All of them let you define new data types ☐

(b) All of them let you define new values ☐

(c) All of them let you define new pointers ☐

(d) All of them let you define new structure ☐

8. Which of the following is not included in a structure declaration?

(a) Struct ☐

(b) Tag name ☐

(c) Identifiers ☐

(d) All of the above ☐

SECTION—B

(*Marks* : 15)

Answer the following questions : 3×5=15

1. *(a)* Write the difference between while loop and do-while loop.

OR

(b) What is the output of 5 3 2%10 8 6 ?

2. *(a)* What is conditional operator?

OR

(b) Why do programmer avoid using 'goto' statement?

3. *(a)* What is recursion?

OR

(b) Explain in brief gets() and puts().

4. *(a)* Explain the relationship between pointers and arrays.

OR

(b) Write a note on command line argument.

5. *(a)* How does structure differ from union?

OR

(b) Explain enum in brief.

(PART : B—DESCRIPTIVE)

(*Marks* : 52)

The figures in the margin indicate full marks for the questions

UNIT—I

1. *(a)* Draw the flowchart and explain the process of compiling and running or executing C programming. 7

(b) Define variable. What are the rules for creating variables in C programming? 6

OR

2. *(a)* Write brief notes on operator precedence, associative and type conversions in expressions. 7

(b) Differentiate between operators and operands. Discuss the commonly used operators in C programming. 6

UNIT—II

3. *(a)* Explain if ... else and else ... if with flowchart and program. 7

(b) What is nested for loop? Write a program to illustrate nested for loop and explain it. 6

OR

4. *(a)* Explain and differentiate call by value and call by reference with examples. 7

(b) Write a program to differentiate break and continue statements. Explain briefly. 6

UNIT—III

5. *(a)* Write a C program of function for concatenation of two strings and comparing two strings. 7

(b) Write a C program for illustrating array of pointer. Explain in detail. 6

OR

6. *(a)* How do two-dimensional arrays allocate in the memory? Explain with suitable example. 7

(b) Write a program that sorts an array using bubble sort method. 6

UNIT—IV

7. *(a)* What is structure within structure? Write a C program to demonstrate structure within structure and explain in brief. 7

(b) Explain the three modes of opening files. 6

OR

8. *(a)* Explain any five string handling functions in C. 7

(b) What is file? Explain any four file handling functions giving an example each. 6

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