

**2 0 2 3**

( CBCS )

( 6th Semester )

**MATHEMATICS**

TWELFTH (C) PAPER

**( Computer Programming in C )**

**( Theory )**

*Full Marks : 75*

*Time : 3 hours*

*The figures in the margin indicate full marks for the questions*

**( SECTION : A—OBJECTIVE )**

Tick (✓) the correct answer in the brackets provided :

1×8=8

**1.** Which of the following is not a C token?

(a) Keyword ( )

(b) Expression ( )

(c) String ( )

(d) Int ( )

**2.** What will be the output of the following statement?

5 (3 \* 2) % 10 8 \* 6

(a) 27 ( )

(b) 42 ( )

(c) 32 ( )

(d) 37 ( )

- 3.** The entry-controlled loop statement is known as
- (a) while ( )
  - (b) for ( )
  - (c) do while ( )
  - (d) if-else ( )
- 4.** Which of the following reads multiple characters from the keyboard?
- (a) getchar ( )
  - (b) getche ( )
  - (c) getch ( )
  - (d) gets ( )
- 5.** In an array, subscript begins at
- (a) 0 ( )
  - (b) 1 ( )
  - (c)  $n$  ( )
  - (d) None of the above ( )
- 6.** When operator \* is placed before a pointer variable in an expression, it means
- (a) address of ( )
  - (b) value of address ( )
  - (c) address of pointer variable ( )
  - (d) address of main ( )
- 7.** Which of the following is not included in a structure variable declaration?
- (a) Struct ( )
  - (b) Tagname ( )
  - (c) Identifier ( )
  - (d) All of the above ( )
- 8.** 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 structures ( )

**( SECTION : B—SHORT ANSWER )**

( Marks : 15 )

Answer the following questions :

3×5=15

UNIT—I

1. What are the four basic data types in C?

**OR**

2. What do you understand by 'go to' statement? Why is it not used frequently in program?

UNIT—II

3. What is 'if else' statement?

**OR**

4. What is 'switch' statement?

UNIT—III

5. What are the differences between array and string?

**OR**

6. Explain strlen().

UNIT—IV

7. What are the advantages of pointer?

**OR**

8. Explain structures.

UNIT—V

9. What is multidimensional array?

**OR**

10. Explain in brief strcmp() and strcat().

**( SECTION : C—DESCRIPTIVE )**

( Marks : 52 )

Answer the following :

UNIT—I

1. Write brief notes on : 13  
(a) Logical operators  
(b) Assignment operators  
(c) Conditional operators

**OR**

2. (a) Define variable. What are the rules for creating variables in C programming? 7  
(b) Write brief notes on operator precedence, associative and type of conversions in expressions. 6

UNIT—II

3. (a) Write a simple program to differentiate 'while' and 'do while' statements. 7  
(b) Explain recursion with suitable example. 6

**OR**

4. Explain continue and break statements by giving suitable examples. 13

UNIT—III

5. Explain concatenation of two strings and comparing of two strings by considering suitable examples. 13

**OR**

6. (a) Define storage class in C. Explain different storage classes in C. 7  
(b) What is a string? Explain by giving example how string can be declared and initialized. 6

UNIT—IV

7. (a) Explain differences between structure and union. 7  
(b) Write brief notes on structures and functions. 6

**OR**

8. (a) Define self-referential structure and explain with an example. 7  
(b) Define array of structure in C and explain with an example. 6

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