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**TCS-201**

**B. Tech. (Second Semester)**  
**Mid Semester EXAMINATION, 2014**  
**(All Branches)**  
**PROGRAMMING IN 'C'**

*Time : Two Hours ]*

*[ Maximum Marks : 60'*

**Note :** (i) This question paper contains two Sections :  
Section A and Section B.

(ii) Answer all questions in Section A by choosing the correct option from multiple choices. Each question carries 2 marks.

(iii) Answer any *four* questions from Section B. Each question carries 12 marks.

**Section—A**

**2 each**

1. Attempt all multiple choice questions, choosing the correct option.

(i) What will happen if in a C program you assign a value to an array element whose subscript exceeds the size of array ?

- (a) The element will be set to 0.
- (b) The compiler would report an error.
- (c) The program may crash if some important data gets overwritten.
- (d) The array size would appropriately grow.



(ii) Every string is terminated by :

- (a) Zero
- (b) Null Terminator
- (c) Character
- (d) None of these

(iii) If the two strings are identical, then strcmp( ) function returns :

- (a) -1
- (b) 1
- (c) 0
- (d) None of these

(iv) Which of the following functions is more appropriate for reading a multi word string ?

- (a) scanf( )
- (b) gets( )
- (c) Can be both
- (d) None of these

(v) How many characters are there in "X" ?

- (a) 1
- (b) 2
- (c) 3
- (d) None of these

(v) int a[5] = {1, 2, 3, 4, 5};

int sum = 0;

for (i = 0 ; i < 5; i ++)

{

    If (i%2 == 0)

        sum = sum + a[i];

    }printf("%d", sum);

- (a) 10
- (b) 9
- (c) 6
- (d) None of these

## Section—B

12 (6+6) each

Note : Attempt any *four* of the following questions.

2. (a) What are arrays ? What are the advantages and disadvantages of arrays ? Is it necessary to check bound in array ? Explain.
- (b) Write a program to sort the elements of an array in descending order.
3. (a) What are strings ? Explain the difference between character array and string with a programming example.
- (b) Write a program to concatenate two strings without using standard library functions.
4. (a) What are Functions ? Explain the syntax of function declaration, function definition and function call.
- (b) Write a program to input three numbers in main function and calculate the largest number by passing these numbers to the function and print the largest number in the main function.
5. (a) What are the disadvantages of scanf( ) function ? What will you do to overcome this problem ? Explain any *five* predefined string functions with their general syntax and use ?
- (b) Write a program to copy the n characters of string from the mth position in another string and print both the strings.
6. (a) Explain advantages of using functions. Explain the difference between actual and formal parameters with the help of an example.
- (b) Write a C program to convert a number from decimal to hexadecimal using an array.