

Registration No. :

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Total number of printed pages – 2

B. Tech
BE 2105

Special Examination – 2012

PROGRAMMING IN C

Full Marks – 70

Time : 3 Hours

Answer Question No. 1 which is compulsory and any **five** from the rest.

The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10
- (a) Check the correctness of the following C statement :
int a=b=c=5;
- (b) Find the value of X if any from the following C statements :
int X;
X=10/2*4.3+5-1.1;
- (c) What would be the output of the following C programs:
#include<stdio.h>
main()
{
int a=5, b=2;
A=a+++ --2;
printf(“%d%d”, a, b);
}
- (d) #include<stdio.h>
main()
{
int i=4, j=-1, x, y;
X=i&&j|j+1&&j;
Y=i+1&&j+1||i-j;
printf(“%d%d%d”. x, y, x= =3);
}
- (e) Represent the following array by using pointer :
int A[10][5];

P.T.O.

- (f) Define and specify the use of recursion
- (g) Write the difference between calling a function by value and calling the function by reference.
- (h) Find the value of L from the following C statements :
 char A [] = {'V', 'S', 'S', 'U', 'T', '\0'};
 int L;
 L= strlen(A);
- (i) Differentiate between structure and union with a suitable example.
- (j) Mention the different mode in which a file can be opened.
2. (a) Draw a flowchart for finding whether an input number is a prime number or not. 5
- (b) Write a Program in C to generate the following output : 5
- ```

 1
 1 2 1
 1 2 3 2 1
 1 2 3 4 3 2 1

```
3. (a) Write a program in C to check whether a given number is palindrome. 5
- (b) Write a program in C to sort an array that contains 10 integer numbers. 5
4. (a) Mention the important storage classes in C. Give a suitable example for each. 5
- (b) How would you input a multi-word string in C ? Write a program to count the number of characters and words in a multi-word string. 5
5. (a) For a given input string, write a function to reverse it. 5
- (b) Write a program in C to sort ten input strings alphabetically. 5
6. (a) Write a program using structure that will read and display the following details of 10 students 5  
 Name, Roll Number, Total Mark
- (b) Write a C function that swaps two numbers using the concept of pointers. 5
7. (a) Write a program in C that reads string from keyboard and writes them to file. 5
- (b) Write the different file operations associated with file management in C. 5
8. Write short notes on any **two** from the following : 5×2
- (a) Dynamic memory allocation
- (b) Control structures
- (c) Monolithic vs. modular program