Thapar Institute of Engineering and Technology, Patiala
Department of Computer Science & Engineering
END SEMESTER EXAMINATION

B. E. (First Year): Semester-I (2018)
(COE/COEM/CAG/CML/EGR/EGRM/SRM/EGM)
December 8, 2018
Time: 3 Hours, M. Marks: 100

Course Code: UTA017
Course Name: Computer Programming
Saturday, 14.00 – 17.00 Hrs
Name Of Faculty: HSP, RKG, VA, PGH, SES, HKG, RKR, RAP, GS

Note: ***Attempt all questions. Assume missing data, if any, suitably***

Q.1 a) What is the purpose of '\0' in a C string?
b) How would you *input* and *output* the following string "He is a good boy."

Q.2 Distinguish between *break* and *continue* by explaining the effects of each on the following pieces of code. (2,3)

```
int main( )
{
        int x;
        for(x=1 ; x<10;printf("%d",x++))
        {
                if(x==5)
                        break;
        }
        return 0;
}
```

```
int main( )
{
        int x;
        for(x=1;x<10;printf("%d",x++))
        {
                if(x==5)
                        continue;
        }
        return 0;
}
```

Q.3 Declare in C a 2D array of 3 rows and 4 columns of integers. Provide code to display the elements of such an array. (2.5,2.5)

Q.4 For each type of storage classes in C, explain the life and scope, using example where appropriate. (2,3)

Q.5 a) Write a C Program to check whether the given number is present in an array or not, if "Yes" then print its location.
b) Also draw the flow chart for the same program. (10)

Q.6 Input a positive integer and write a C program to convert it into equivalent binary form. (10,5)

Example Output:

Enter a positive integer = 134
Its binary equivalent is = 10000110

Q.7 Write a C Program to find the largest number from a given array of 10 elements. (10)

Q.8 Write a C program to find the given element in a link list using three functions: (a) *create*, (b) *display* and (c) *find*. (10)

Q.9 Write a C program to implement a Stack using following functions:
(a) push, (b) *pop* and (c) *display* (3,3,4)

Q.10 Write a C program which accepts two strings and compare them whether they are equal or not. (4,4,2)

Q.11 Demonstrate the use of structures by writing a C program to define a structure of a student involving *name, roll* and *marks* as its elements. Then input and output the information of 3 students. (4,6)

(10)