UNIT-IV

Q.7. a) Without using string.h, write a program which reads a string & then removes the last two characters of the string and displays that. The length of input string cannot be asked from the user. For example, if inputted sting was "ABCDE", output should be "ABC". 10

b) Write short note on enumerated data type. 5
c) What is use of union? When is it useful? 5

Q.8. a) How the members of a structure variable are assigned initial values? How is a structure member accessed? 5

b) Write a C program which reads all numbers from a given input file and stores average of those numbers in an output file. Both file names are input from user. 10

c) What are advantages of using a data file? 5

BT-1/DX: 8030

CSE-101-E: Fundamental of Computer and Programming in C

Time : Three Hours Maximum Marks : 100

Note:- Attempt 5 questions in all selecting at least one question from each of four unit.

UNIT-I

Q.1. a) Name some typical auxiliary memory devise. How does this type of memory differ from the computer's main memory? 7

b) Explain how alphabets are stored inside a digital computer? Remember computer stores only binary numbers. 6

c) Why an operating system is need in a computer? What will be the problem if O.S. is not present in the computer? 7

Q.2. a) Do following number system conversions:
i) 110010.101 decimal to octal
ii) 10110110101 binary to decimal and hexadecimal
iii) 7604.315 octal to decimal
iv) ABCDE hexadecimal to decimal 3+6+3+3=15

b) Write short note on DOS. 5

UNIT-II

Q.3. a) "For executing a C program, you will need a compiler, but for running a Java program you will

not need any translator". Comment on validity of this statement and justify your answer.   6

b) Define mnemonic. Where are these used?   . 6

Q.4. a) Draw a flow chart for generating a quadratic equation from given two roots. If roots supplied are real only then quadratic equation should be generated.   8

b) Explain briefly terms-FTP, Web-Page.   6

c) Explain the working of Internet in detail.   8

UNIT-III

Q.5. a) Write an interactive C program that will convert a positive integer quantity (less than 40) to a roman numeral (e.g. 12 will be converted to XII, 23 as XXIII, 5 as V, 39 as XXXIX). Design the program such that it will execute repeatedly until a value of zero is read.   12

b) Find the output of following syntactically correct code and explain how you obtained it: 5

```c
#include <stdio.h>
main()
{
        int i = 0, x = 0;
        for (i = 1; i < 10; ++i)
        {       if (i % 2 == 1)
                        x += i;
                else
                        x --;
                printf("%d ", x);
                if ((i +x) % 4 == 0)
                        break;
        }
        printf("\nx = %d\n", x);
}
```

c) Find the output of following syntactically correct code: 3

```c
#include <stdio.h>
main()
{
        int i, j, k, x = 0;
        for ( i = 0; i < 5; ++i)
                for (j = 0; j < i ; j++)
                {
                        k = (i +j - 1);
                        printf("%d ", k);
                }
}
```

Q.6. a) A C program contains following statements:
```c
#include<stdio.h>
float x, y, z;
```
(i) square root of (x+y), cube of (x-z)
(ii) x, y and z, with a minimum field width of 6 characters per value.

b) Find the output of following syntactically correct code: 4

```c
#include <stdio.h>
int c[10] = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 0};
main()
{
        int a, b = 0;
        for ( a = 0; a < 10; a++)
           if ( c[a] % 2 == 1) b += c[a] ;
                printf('%d ", d);
}
```

c) Using suitable functions and their parameters. Write a program to find transpose of a matrix of order specified by the user. If proper functions & parameters are not used, evaluation of answer will be done out of 6 marks.   10