INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

MBA II Semester End Examinations (Regular/Supplementary) - May/June, 2018

Regulation: IARE–R16

C Programming

Time: 3 Hours   (MBA)   Max Marks: **70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Identify the different symbols used in flowchart. Draw a flowchart to find the average of three input integer numbers. **[7M]**

   (b) If a four digit number is input through the keyboard, write a C program to obtain the sum of the first and last digit of this number. **[7M]**

2. (a) What is the difference between a break and continue statement? Explain with an example. **[7M]**

   (b) Design an algorithm that accepts a positive integer and reverses the order of its digit. **[7M]**

UNIT – II

3. (a) Explain recursion function used in C language with an example. **[7M]**

   (b) Write a C program to find transpose of a matrix and display the output in matrix format. **[7M]**

4. (a) Explain the different storage classes used in C programming language with examples. **[7M]**

   (b) What will be the output of the following code snippet? Justify your answer. **[7M]**
   ```
   main()
   {
        static int c=5;
        printf("c=%d\n", c --);
        if ( c )
        main();
   }
   ```

UNIT – III

5. (a) Explain the difference between malloc and calloc functions. **[7M]**

   (b) Write a C program to count vowels, consonants in a string which is entered by the user. **[7M]**

6. (a) List out any four string handling functions with example. **[7M]**

   (b) Write a C program to swap two number using call by reference. **[7M]**

UNIT – IV

7. (a) Mention the differences between structures and unions. **[7M]**

   (b) Write a program to add 2 complex number using structures. **[7M]**

8. (a) What will be the output of the following code snippet? Justify your answer. **[7M]**

   i.
   ```c
   #include <stdio.h>
   enum week { Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday};
   int main()
   {
        enum week today;
        today = Wednesday;
        printf("Day %d", today+1);
        return 0;
   }
   ```

   ii.
   ```c
   #include<stdio.h>
   int main()
   {
        struct value
        {
             int bit1:1;
             int bit3:4;
             int bit4:4;
        }
        bit={1, 2, 13};
        printf("%d, %d, %d\n", bit.bit1, bit.bit3, bit.bit4); return 0;
   }
   ```

   (b) Write a C program to add two distances entered by user. Measurement of distance should be in inch and feet. (Note: 12 inches = 1 foot)

   [7M]

UNIT – V

9. (a) Explain the following file I/O functions with example

   i. fopen( )   ii. fread( )   iii. fwrite( )   iv. fclose( ) **[7M]**

   (b) Write a C program to read name and marks of n number of students from user and store them in a file. **[7M]**

10. (a) Write a C program to copy contents from one file to another. **[7M]**

    (b) What will be the output of the following code snippet? Justify your answer. **[7M]**

    ```c
    main()
    {
         char ch = 'z';
         static char str[ ]= "Zebra",
         putc (ch, strprn);
         fprintf(stdprn, "%s",str);
         fwrite (str,5,1, stdprn);
         fputs(str,stdprn);
    }
    ```