

Total No. of Questions :8]

SEAT No. :

**P2696**

**[5039]-104**

[Total No. of Pages :3

**M.Sc. Tech. - I**

**INDUSTRIAL MATHEMATICS WITH COMPUTER APPLICATIONS**

**MIM-104: 'C' Programming**

**(2013 Pattern) (Semester - I)**

*Time : 3 Hours]*

*[Max. Marks :50*

*Instructions to the candidates:*

- 1) *All questions carry equal marks.*
- 2) *Figures to the right indicate full marks.*
- 3) *Attempt any five question out of eight.*

**Q1)** Answer the following:

**[4+4+2=10]**

- a) What is a file? State any four operations on file.
- b) Write a C program to print 'n' terms of Fibonacci series using recursion  
1, 1, 2, 3, 5, 8.
- c) Give any two rules to declare variable.

**Q2)** Answer the following:

**[4+4+2=10]**

- a) Write different standard library functions accept string from the user.
- b) Write the difference between while and do-while loop.
- c) Justify the output:

```
#include <stdio.h>
```

```
main ( )
```

```
{
```

```
static int a[] = {10, 20, 30};
```

```
static int * mess [ ] = {a, a + 1, a + 2};
```

```
printf("%d%d", size of (a), size of(mess),
```

```
size of (mess[1]));
```

```
}
```

**P.T.O.**

**Q3) Answer the following:** [4+4+2=10]

- a) Explain the difference between structure and union.
- b) Write a program to accept the string and count the occurrence of character in a string using pointer and function.
- c) What is DMA? Give syntax and use of malloc ( ) function.

**Q4) Answer the following:** [4+4+2=10]

- a) Define array. How to declare an array. What are different types of array? Give suitable example.
- b) What is the difference between if-Else and switch statement.
- c) What are command Line Argument?  
Give any one advantage of command line argument

**Q5) Answer the following:** [4+4+2=10]

- a) Explain increment and decrement operator in C.
- b) Write a note on storage classes.
- c) State True /False and justify “C is middle level language”.

**Q6) Answer the following:** [4+4+2=10]

- a) What are different operations that can be performed on pointers?
- b) Write a program to store information of player (name, no\_of\_inning, total\_score, avg). Calculate the average score for each player and display information of all players.

- c) Write the output of the following:

```
i) # define square (x) x * x;
    main ( )
    {
        printf (“\n%d”, square (4 + 2));
    }

ii) main ( )
    {
        int a = 5;
        do
        {
            printf (“%d”, a);
            a = -1;
        } while (a > 0);
    }
```

**Q7)** Answer the following:

**[5+5=10]**

- a) Explain:
  - i) Passing pointer to function
  - ii) Function returning pointer
- b) Write a program to accept the number and find sum of digit of a number till it reduces to a single digit number [961 → 16 → 7].

**Q8)** Answer the following:

**[5+5=10]**

- a) Explain:
  - i) Call by value
  - ii) Call by reference
- b) Write a program to accept 'n' integer store them in an array and print reverse of an array.

*EEE*