

Total No. of Questions :8]

SEAT No. :

**P2701**

**[5039]-204**

[Total No. of Pages :3

**M.Sc.(Tech.)**

**INDUSTRIAL MATHEMATICS WITH COMPUTER APPLICATIONS**

**MIM - 204 : C++**

**(2013 Pattern) (Credit System) (Semester-II)**

*Time : 3 Hours]*

*[Max. Marks :50*

*Instructions to the candidates:*

- 1) *Attempt any five out of eight questions.*
- 2) *Figures to the right indicates full marks.*

**Q1)** Attempt the following:

- a) Write a note on polymorphism. [4]
- b) Explain the following with example.
  - i) Parameterized constructors
  - ii) Constructors with default parameters. [4]
- c) What does 'this' pointer points to ? [2]

**Q2)** Attempt the following:

- a) Write a note on Exception Handling. [4]
- b) Explain any two types of Inheritance. [4]
- c) State True/False.
  - i) A file pointer always contains the address of a file.
  - ii) A pointer to a base class cannot be made to point to objects of derived class. [2]

**Q3)** Attempt the following:

- a) What do you mean by friend function? Give syntax to declair friend function. What are the features of the friend function? [4]
- b) Explain the concepts of objects and classes. [4]
- c) Define the following
  - i) Identifiers
  - ii) Keywords [2]

**P.T.O.**

**Q4)** Attempt the following:

- a) What do you mean by Inline function? Differentiate between Inline function and macro? [4]
- b) Write a note on operator overloading. [4]
- c) What do you mean by pure virtual function? [2]

**Q5)** Attempt the following:

- a) Explain the two ways of passing objects as function arguments. [4]
- b) Write a note on structure of C++ program. [4]
- c) What do you mean by destructors? [2]

**Q6)** Attempt the following:

- a) State any four benefits of OOP. [4]
- b) Identify errors if any

- i) 

```
# include (iostream-h)
Void main ( )
{
    int num[]={1,2,3,4,5,6};
    num [1] == [1]num? cout <<"Success": Cout <<" Error";
}

```

- ii) 

```
# include (iostream.h)
# include ( malloc-h)
char * allocatmemory ( );
Void main ( )
{
    char * str;
    str=allocatmemory ( );
    cout << str;
    delete str,
    str = " ";
    cout << str;
}
char * allocatmemory ( )
{
    str = " Memory allocation test,";
    return str;
}

```

- iii) Char \* CP = Vp; [4]
- c) Explain access rights in derived class for public, private and protected inheritance. [2]

**Q7)** Attempt the following:

- a) State any five rules for Virtual Function [5]
- b) Write a C++ program that reads a text file and creates another file that is identical except that every sequence of consecutive blank spaces is replaced by a single space. [5]

**Q8)** Attempt the following:

- a) What is generic programming? How it is implemented in C++? [5]
- b) Write a C++ program to add two matrices. [5]

