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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FOURTH SEMESTER B.TECH DEGREE EXAMINATION, JULY 2017

Course Code: IT204

Course Name: OBJECT ORIENTED TECHNIQUES (IT)

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two questions. Each question carries 15 marks.

1 a) Explain the OOP principles? (7)

b) Write a C++ program to read an array of 10 numbers and perform bubble sort. (8)

2 a) Write a C++ program that performs the following: - (10)
i) Read a string of N variables
ii) Reverse the input string and display it
iii) Check if the input string is palindrome.

b) Compare Objects and classes (5)

3 a) Define operator overloading with an example. How a "const" object data can be changed? (10)

b) Write a C++ program to read an array of 10 numbers and to find the sum of all elements in it. (5)

PART B

Answer any two questions. Each question carries 15 marks..

4 a) Explain the concept of private inheritance with an example program. (7)

b) Explain the concept of multiple inheritance with an example program. (8)

5 a) Consider the following declaration and answer the following questions:- (8)

```
class PPP
    {
    int H:
       protected :
    int S;
       public :
           void input (int);
           void out();
    };

    class QQQ : private PPP
    {
    int T;
         protected :
    int U;
```

```
 public :
        void indata(int, int);
        void outdata();
};

class RRR : public QQQ
{
int M;
    public :
   void disp();
};
```

i) Name the base class and derived class of the class "QQQ".

ii) Name the data member(s) that can be accessed from function "disp( )".

iii) Name the member function(s), which can be accessed from the objects of class "RRR".

iv) Is the member function "out( )" accessible by the object of the class "QQQ"? Why?

b) Differentiate new and Delete keywords with an example. (7)

6 a) Write a program to sort an integer array of 10 elements using pointers. (10)

b) Mention any 5 applications of using pointers. (5)

PART C

Answer any two questions. Each question carries 20 marks.

7 a) Explain friend functions. Write a C++ program to find the mean value of inputted digits using friend function. (10)

b) Explain the application of "seekg( )" and "tellg( )" functions in C++. (5)

c) Mention any two predefined stream objects in C++ with its application. (5)

8 a) What do you mean by exception handling? Write a C++ program that demonstrates multiple exception handling. (13)

b) What is pure virtual function? Why they are useful? (7)

9 a) What do you mean by exceptions in C++? Why do we need to handle exceptions? (5)

b) Explain try, catch and throw blocks with proper example (15)

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