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Paper Id: 113503 Roll No: Subject Code: RIT053

BTECH
(SEM V) THEORY EXAMINATION 2018-19
OBJECT ORIENTED TECHNIQUES

Time: 3 Hours

Notes: *Assume any Missing Data.*

Total Marks: 70

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a. Define Dynamic Binding.

b. Differentiate synchronous and asynchronous messages.

c. What will be the output of the program? Justify

```
#include<iostream>
using namespace std;
main() {
int const a = 5;
a++;
cout<<a;
}
```

d. Differentiate Call by reference and return by reference.

e. What is the significance of access specifiers in a class?

f. What is the use of typedef?

g. List the four kinds of relationship in UML.

SECTION B

Attempt any *three* of the following: 7 x 3 = 21

a. What do you mean by an object? Discuss the various characteristics of object with examples?

b. Explain UML, why we use UML and draw architecture of UML.

c. What do you understand by Modeling? Explain the principles of modeling.

d. Discuss array in c++ .Write a program of bubble sort in c++.

e. Explain Type Casting in C++ and determine its types.

SECTION C

Attempt any *one* part of the following: 7 x 1 = 7

(a) Discuss JSD and its approach comparing with object modeling techniques.

(b) Show the difference between reference and pointers. Demonstrate pointer constant and pointer to constant using example.

Attempt any *one* part of the following: 7 x 1 = 7

(a) What do you mean by operator overloading? What are the pitfalls of operator overloading? Explain in brief.

(b) What are the three models in OMT? How object oriented analysis and design attached with OMT. Explain with example

5. **Attempt any *one* part of the following:** **7 x 1 = 7**

(a) Describe the concept of inheritance and its types with example in c++.

(b) Illustrate Polymorphism in c++ with suitable example

6. **Attempt any *one* part of the following:** **7 x 1 = 7**

(a) Design a program of swapping in c++ using friend function and describe friend function in detail.

(b)Explain the concept of Virtual function and Pure Virtual function.

7. **Attempt any *one* part of the following:** **7 x 1 = 7**

(a) Draw UML Timing Diagram for ATM machine

(b) Draw UML Class Diagram for Library Management System