

Reg. No. _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FOURTH SEMESTER B.TECH DEGREE EXAMINATION, DEC 2018

IT 204: Object Oriented Techniques

Max. Marks: 100

Duration: 3 Hrs

PART A*(Answer any two)*

1. a. Explain how polymorphism is implemented in C++? Explain with an example. (7)
- b. Compare object and class. Explain with the help of an example code. (8)
2. a. What do you mean by Object oriented programming? Compare it with procedural programming. (7)
- b. Explain the characteristics of OOP languages. (8)
3. a. Define arrays in C++. Mention its applications. (5)
- b. Write a C++ program to read an array of 10 numbers and perform bubble sort. Also find if the sum of all elements in it (10)

PART B*(Answer any two)*

4. a. What are pointers in C++? Explain with the help of an example. (7)
- b. What is the need of “new” and “delete” operators in C++?. (8)
5. Write a C++ program with the following requisites. Create an array of pointers to objects with class name “Person” The class person has a single data item, “name”, which holds a string representing a person’s name. Two member functions, “setName()” and “printName()”, allow the name to be set and displayed. (15)
Define inheritance. Explain the types of inheritances with syntax.
6. a. (5)
Given a class named “Shape” with derived classes “Rectangle” and “Circle”.
- b. Using the concept of inheritance write a program to find the area of rectangle and circle (10)

PART C

(Answer any two)

7. a. What is stream classes? Mention its advantages. (5)
- b. Describe “istream” and “ostream” classes. (10)
- c. Mention the error status flags and its meaning. (5)
8. Explain the usage of the following functions with syntax.
 - a. Friend function (5)
 - b. Static function (5)
 - c. Virtual function (5)
 - d. The “this” pointer (5)
9. a. Write a program to perform exception handling for Divide by zero Exception. (8)
- b. Create a function called “amax()” that returns the value of the largest element in an array. The arguments to the function should be the address of the array and its size. Make this function into a template so it will work with an array of any numerical type. Write a “main()” program that applies this function to arrays of various types. (12)
