

Reg. No. \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

SECOND SEMESTER MCA DEGREE (REGULAR) EXAMINATION, APRIL 2018

**Course Code: RLMCA102****Course Name: OBJECT ORIENTED PROGRAMMING**

Max. Marks: 60

Duration: 3 Hours

**PART A***Answer All Questions, Each Question Carries 3 Marks.*

1. Explain the structure of a Java program.
2. Write a class in Java to find the ASCII value of the character interactively read through keyboard.
3. List and explain any two uses of super keyword in inheritance.
4. Explain the order of constructor invocation in a multilevel hierarchy.
5. Write a class in Java to search a pattern in a string, if found replace it with another pattern. (Use built in methods)
6. Explain the importance of synchronized keyword.
7. Explain the use of Sequence Input Stream class.
8. Explain the significance of constructors provided by Server Socket class.

**PART B***Answer any one question from each module. Each question carries 6 marks***MODULE – I**

9. a. Explain the features of Object Oriented Programming. (4)  
b. Explain why Java is called a robust and secure language. (2)

**OR**

10. a. Copy Constructors support pass by reference type of parameter passing. Justify the statement with an example. (4)  
b. Explain how instance variable hiding can be prevented in Java. (2)

**MODULE - II**

11. Design an application to store Movie objects (a film title and a tagline) in an array, sort the array alphabetically by title and search (binary search) the array to retrieve a film's tag line, given the title of the film.

**OR**

12. Design classes Square, Rectangle and Triangle that encapsulates three geometric shapes. Each class should implement an abstract method *void area (int x, int y)* that finds the area of three shapes respectively. The variables should be declared in the super class and initialized through sub class constructors. Develop the main class to create and test the objects of classes Square, Rectangle and Triangle.

**MODULE – III**

13. a. List and explain Java System packages. (3)  
b. Differentiate between String class and String Buffer class. (3)

**OR**

14. a. A restricted form of multiple inheritance is provided in Java. Justify. (2)  
b. List the different string constructors used for creating string objects. (4)

**MODULE – IV**

15. a. Differentiate between checked and unchecked Exceptions. (4)  
b. Write a Java program to throw an exception if a searched item is not present in the list. (2)

**OR**

16. a. Explain how a thread can be blocked. (4)  
b. Predict the output and justify your answer. (2)

```
import java.io.*;
```

```
public class UsingFinally
```

```
{
```

```
    public int add(int a, int b)
```

```
    {
```

```
        try
```

```
        {
```

```
            return (a+b);
```

```
        }
```

```
        finally
```

```
        {
```

```
            return 0;
```

```
}  
}  
  
public static void main (String args[])  
{  
    UsingFinally x= new UsingFinally();  
    System.out.println(x.add(5,10));  
}  
}
```

### MODULE – V

17. Explain how primitive data types can be read and written to a sequential file, with an example.

**OR**

18. a) Devise a short application that read bytes from the console and display as characters on the screen. (4)  
b) Explain the merits of using Buffered Reader over File Reader in reading characters from a file. (2)

### MODULE – VI

19. a. Define URL. List the components of an URL. (3)  
b. Explain the objectives of Datagram Packet class. (3)

**OR**

20. a) Explain how an arc can be drawn. (2)  
b) List the attributes of APPLET tag. (4)

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