

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular/Backlog), November 2016

B. Tech in Computer Engineering, Semester V

Roll No.....

COURSE CODE: CSE505

Time: 3 hours

Max. Marks: 100

COURSE TITLE: Web Technologies

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A Objective type multiple choice questions (10 questions @ 1 mark)

10

- i. Which of these methods is used to get x coordinate of the mouse?
a) getX() b) getXCoordinate() c) getCoordinateX() d) getPointX()
- ii. Which of these events will be generated if we close an applet's window?
a) ActionEvent b) ComponentEvent c) AdjustmentEvent d) WindowEvent
- iii. Thread priority in Java is?
a) Integer b) Float c) double d) long
- iv. Which of the following methods return the value as a double?
a) doubleValue() b) convertDouble() c) getDouble() d) getDoubleValue()
- v. Which of these is a protocol for breaking and sending packets to an address across a network?
a) TCIP/IP b) DNS c) Socket d) Proxy Server
- vi. Which of these keywords is used to refer to member of base class from a sub class?
a) upper b) super c) this d) None of the mentioned
- vii. What is the output of this program?

```
class string_class {  
    public static void main(String args[])  
    {  
        String obj = "I LIKE JAVA";  
        System.out.println(obj.charAt(3));  
    }  
}
```


a) I b) L c) K d) E
- viii. Which of these method is used to find out that a thread is still running or not?
a) run() b) Alive() c) isAlive() d) checkRun()
- ix. Which of these is method of ObjectOutputStream interface used to write the object to input or output stream as required?
a) write() b) Write() c) StreamWrite() d) writeObject()
- x. What are generic methods?
a) Generic methods are the methods defined in a generic class.
b) Generic methods are the methods that extend generic class's methods.
c) Generic methods are methods that introduce their own type parameters.
d) Generic methods are methods that take void parameters.

Q.2	Short answer type questions (4 questions @ 2.5 marks)	10
i	Define polymorphism.	
ii	Explain type conversion and casting in Java.	
iii	What do you mean by class path in Java? How can we set a class path?	
iv	Define abstract class in Java.	
Q.3A	What is serialization? Explain with an example.	05
Q.3B	Explain the use of synchronize thread with an example.	05
Q.4A	Write a Java program to replace a given character/ word by another given word/character in a string.	05
Q.4B	Explain the life cycle of a thread.	05
Q.5A	Write a java program to find sum of both the diagonals of a square matrix.	05
Q.5B	Differentiate between swing and awt.	05
Q.6A	Explain the use of inner classes with an example.	05
Q.6B	Write a Java program to create a file named Numbers containing numbers read from the end-user. Also create two files with names Even and Odd that will store even and odd numbers respectively that are read from the file named Numbers.	05
OR		
Q.6B	Write a Java program to demonstrate inheritance in interface.	05
Q.7A	Explain the use of JDBC. Also write steps to connect a java application from a database using JDBC.	05
Q.7B	Write Java code for create an applet draw a circle inside the applet window. Inside the circle draw 3 filled rectangles with different color. If user clicks on a rectangle then color name of that rectangle should be display inside the circle.	05
OR		
Q.7B	Write Java code for an applet that will accept a text from a keyboard & display it on the screen as a moving text from bottom corner to top corner diagonally.	05

Q.8A Write a Java program to design an awt screen to input a telephone bill detail & 10

prepare a telephone bill

Name of Customer (Text Box) : 25 Characters- Key input
Telephone Number (Text Box) : 10 Characters - Key input
Month (Combo Box) : Selectable form month list
No of Calls (Text Box) : Integer- Key Input
Submit (Button) : Submission of form

After submission one more screen should be open and display the following information (read only)

Name, Telephone Number, Month, Number of calls and amount.

Amount should be calculated on the following basis:

Rent = Rs. 200 (fixed),

If Calls ≤ 100 Charges = 0

If Calls > 100 and ≤ 200 (Charges @Rs. 0.40/ Call)

If Calls > 200 and ≤ 500 (Charges @Rs. 0.50/ Call)

If calls > 500 ((Charges @Rs. 0.60/ Call)

Service Tax = 15% of rent + call charges

Amount = Rent + Call Charges + Service Tax

Q.9A Explain the event handling mechanism of Java. Demonstrate the use of 10
anonymous adapter classes in Java with an example.

Q.9B Write a Java program having a non generic class with three generic methods: 10

`<T> void genRead (T list[])`

`<T> void gendisplay(T list[])`

`<T> double genAverage(T list[])`

Create an object of above class and check all three methods with two different numeric type data.

OR

Q.9B Write a Java program to create a mark list containing registration number & 10
marks for a subject is given. The marks & registration number are to be read. If the marks are < 0 , user defined `IllegalMarkException` is thrown out and handled with message "Illegal Mark". For all valid marks, the candidate will be declared as "PASS" if the marks are equal to or greater than 40, otherwise it will be declared as "FAIL". Write a class called `IllegalMarksException` by extending the `Exception`. Write another class `MarkProcess` to process the mark. In the `MarkProcess` class write a validation (`int mark`) method, which if marks are < 0 , will throw an exception of type `IllegalMarkException`. Write another method called `result ()` which will declare the result. Write a class containing main method that will create an object of type `MarkProcess` & call the methods in it to declare the result.