

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular/Backlog), Nov.-Dec. 2015

B. Tech in Computer Science & Engineering, Semester V Sem

Roll No.....

CSE505: Web Technologies

Time: 3 hours

Max. Marks: 100

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. What is the value of 'n' after executing the following code?

```
int n = 20;  
switch(n)  
{  
  case 10: n = n + 1;  
  case 15: n = n + 2;  
  case 20: n = n + 3;  
  case 25: n = n + 4;  
  case 30: n = n + 5;  
}
```

 - (a) This code does not compile.
 - (b) 25
 - (c) 32
 - (d) 23
- ii. Translate this statement into Java:
If the value of temperature is in between 20.0 and 40.0, print "very cold".
 - (a) `if(!(temperature < 20.0 || temperature > 40.0))`
`System.out.println("very cold");`
 - (b) `if(20.0 <= temperature <= 40.0)`
`System.out.println("very cold");`
 - (c) `if(temperature >= 20.0 || temperature <= 40.0)`
`System.out.println("very cold");`
 - (d) `if(temperature >= 20.0 | temperature <= 40.0)`
`System.out.println("very cold");`
- iii. If a local variable of a method `shop()` belonging to a class called Walmart has the same name as a data member of Walmart, which value is used when `shop()` is executing?
 - (a) the local variable's
 - (b) the class variable's
 - (c) the data member's
 - (d) None of the above since this would cause a compiler error.

iv.	Which of the following is TRUE about the piece of JAVA code below if we judge the statements independently? final double PI; int radius = Integer.parseInt("3.5"); double area = Math.PI * Math.pow(radius, 2); (a) The third statement computes the area of a circle whose radius is in variable radius. (b) The first statement correctly declares the constant PI. (c) The second statement correctly obtains the radius from the given string. (d) The third statement incorrectly uses Math.pow.
v.	What is the output of the following code if the input string is "CS 180"? Scanner scanner = new Scanner(); String str; str = scanner.next(); System.out.print(str); (a) CS180 (b) CS (c) CS 180 (d) The above code fragment does not compile.
vi.	The Java compiler translates source code into (a) machine code. (b) Assembly code. (c) Byte code. (d) JVM code.
vii.	Which of these is TRUE of the relationship between objects and classes? (a) A class is an instance of an object. (b) An object is the ancestor of its subclass. (c) An object is an instance of a class. (d) An object is the descendant of its superclass.
viii.	What is the output of this program? class isNaN_output { public static void main(String args[]) { Double d = new Double(1 / 0.); boolean x = d.isNaN(); System.out.print(x); } } [a] 0 [b] 1 [c] True [d] False
ix.	Which of these method of class String is used to obtain length of String object? [a] get() [b] Sizeof() [c] lengthof() [d] length()
x.	A deployment descriptor describes [a] web component response settings [b] web component settings [c] web component request objects [d] All of the above

Q.2	Short answer type questions (4 questions @ 2.5 marks)	10
A	Differentiate between wait() and sleep()?	
B	Differentiate HTML, CSS and JavaScript.	

C	Explain Interfaces and Classes in Java.	
D	Is it necessary that each try block must be followed by a catch block?	
Q.3A	Explain Web servers operation and general server characteristics.	05
Q.3B	Debug the code to rectify the compile time error thrown by the given code.	05
	<pre> class NoDefConst { NoDefConst(String s) { System.out.println("fsdf"); } } class SubClass extends NoDefConst { </pre>	
Q.4A	How "compile once and run anywhere" is implemented in Java, Explain.	05
Q.4B	Explain J2EE architecture. Describe the existence and importance of cookies.	05
Q.5A	What is the purpose of garbage collection? How Java handles automatic garbage collection?	05
Q.5B	Can we override static method? Differentiate super() and this().	05
Q.6A	Explain Mouse and key events with respect to event handling in Java.	05
Q.6B	Write a JavaScript program to create a table with two levels of column label: an overall label, meals and three secondary labels, breakfast, lunch and dinner. There must be two levels of row labels: an overall label, foods and four secondary labels, bread, main course, vegetable and dessert. The cells of the table must contain a number of grams for each category of the food.	05
	OR	
Q.6B	How multiple inheritance is achieved in Java? Following code creates an interface. Will this code compile successfully?	05
	<pre> public interface FamousLine { void ShowLine(){ System.out.println("Show Line"); }; } </pre>	
Q.7A	Explain Servlet life cycle. Discuss HttpServletResponse and HttpServletRequest with suitable example.	05
Q.7B	Define an exception called "NoMatchException" that is thrown when a string is not equal to "India". Write a program that uses this exception.	05
	OR	
Q.7B	Write a program to consider "sentence having three lines" as an input from user and write in the text file and afterwards read the same content from file.	05

Q.8	Create a try block that is likely to generate three types of exception and then incorporate necessary catch blocks to catch and handle them appropriately.	10
Q.9A	Construct Login functionality using JSP. Under "Login", take input from user – username and password. Match them, if OK, then display, Login Successful, otherwise, display login failed.	10
Q.9B	Write a Javascript program to create nested ordered lists of cars. The Outer List must have three entries: compact, midsize, and sports. Inside each of these three lists there must be two sublists of body styles. The compact- and midsize-car sublists are two door and four door; the sports-car sublists are coupe and convertible. Each body-style sublist must have at least three entries, each of which is the make and model of a particular car that fits the category. The outer list must use uppercase Roman numerals, the middle lists must use uppercase letters, and the inner lists must use Arabic numerals. The background color for the compact-car list must be pink; for the midsize-car list, it must be blue; for the sports-car list, it must be red. All of the styles must be in a document style sheet.	10
OR		
Q.9B	Assume that the bank maintains two kinds of accounts for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current Account provides cheque book facility but no interest. Current account should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. In this program student is expected to create 3 classes as described below. 1. Account Class : This is an abstract class. It contains following information, - Customer Account number an integer number, This is automatically generated starting from 101. This method is overridden in the two subclasses. 2. Curr-acnt class : This is one subclass of above defined Account class and stores following information, - Balance in Account. - Interest Rate. - Penalty. This class contains following methods, - Overridden method calculate Balance to calculate the balance in account. - Accept deposit from customer and update the balance. - Compute and deposit interest. - Method that displays the data in this class 3. Savings-acnt class This is one subclass of above defined Account class and stores following information, - Balance in Account. - Interest Rate. This class contains following methods, - Overridden method calculate Balance to calculate then balance in account. - Accept deposit from customer and update the balance	10