

[Total No. of Questions - 9] [Total No. of Printed Pages - 4]  
(2064)

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B. Tech 4th Semester Examination

Internet Technology (N.S.)

CS-223

Time : 3 Hours

Max. Marks : 100

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt all Sections.

**SECTION - A**

*Note:* Attempt any One Question.

1. Answer all parts of the following: (4×5=20)
  - (i) What is meaning of constructor overloading? Give example.
  - (ii) What is access specifier? How many access specifier available in Java? Explain with the help of example.
  - (iii) What are Java Buzz words? Explain with proper example.
  - (iv) Write a program to demonstrate difference between implicit and explicit type casting.
2. Answer all parts of the following: (4×5=20)
  - (i) How is Java more secured than other programming languages?
  - (ii) What is the usage of final keyword? Give example for every use.
  - (iii) Write a program to check if a string is palindrome.

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[P.T.O.]

- (iv) Write a program to check whether a number is power of 2 or not. (i.e. If input: 16 then your program should print true)

### SECTION - B

*Note:* Attempt any One Question.

3. Answer all parts of the following: (4×5=20)

- (i) What is multiple inheritance? Why Java doesn't support multiple inheritance?
- (ii) Explain the difference between following
- (a) throw and throws
  - (b) catch and finally
- (iii) Explain architecture of JVM.
- (iv) Suppose the following programming situation:
- (a) A method is used to calculate the area of a rectangle when length and breadth are given.
  - (b) The same method may be used to calculate the area of a circle when radius is given.

Use method overloading facility available in Java to implement the above programming situation.

4. Answer all parts of the following: (4×5=20)

- (i) What is difference between abstract class and interface? Give example also to support your answer.
- (ii) What kind of polymorphism is available in Java? Use examples to support your answer.
- (iii) Write a program that will read a number, create your own exception that will print a message "enter larger number" if entered number is less than 10.

- (iv) Define an abstract class Shape, having a function area(). Create a subclass Rectangle and overrides area() method that will calculate the area of the rectangle.

### SECTION - C

*Note:* Attempt any One Question.

5. Answer both parts of the following: (2×10=20)
- (i) Explain thread life cycle. Write a program to create a thread and also demonstrate life cycle with the help of example. Also change priority of thread.
- (ii) (a) What is Event Delegation Model? Write a program with the help of Action Listener, Mouse Listener to demonstrate event handling.
- (b) Why we use Layout Managers in Java? Explain Different type of Layout Managers used in Java AWT.
6. Answer both parts of the following: (2×10=20)
- (i) What is filter stream? Write a program to write primitive data into file and also read the data in primitive data type.
- (ii) Why swing is light weight than AWT? What is event dispatch thread? Write a program in Java using swing to create a simple frame in EDT.

### SECTION - D

*Note:* Attempt any One Question.

7. Answer both parts of the following: (2×10=20)
- (i) Write the Java code required to create a moving banner for an input string. Embed this applet in an HTML tag.
- (ii) What are different types of Driver? Write a program in Java using prepared Statement to show data from a table. What is advantage of using Prepared Statement over Statement [table: emp(emp\_id, name, salary)].

**[P.T.O.]**

8. Answer both parts of the following: (2×10=20)
- (i) (a) Describe the different stages in the life cycle of an applet. Distinguish between `init()` and `start()` methods.
  - (b) What is a Java Bean? What are the advantages of using Java Beans?
  - (ii) What is Scrollable Result Set? Write a program using JDBC which demonstrate use of scrollable Result Set.

#### SECTION - E

9. Answer all parts of the following: (10×2=20)
- (i) What is javadoc command? Which comment style used for javadoc?
  - (ii) What is a literal? How many types of literals are there in Java?
  - (iii) List out some method for String manipulation in Java.
  - (iv) What is meant by garbage collection?
  - (v) What is the use of super keyword?
  - (vi) What are Packages? What is the use of Packages?
  - (vii) What would be the output of following Java Code?

```
class ABC{
public static void main (String args[ ]){
int m,n,r;
int x=40, y=35, z=20, w=10;
m=x*y/z-w;
n=x*y/ (z-w);
r=m-n;
system.out.print ("Value of r: "+r);}}
```
  - (viii) What is the use of synchronized keyword? Give a situation where use of synchronized if preferred?
  - (ix) What are the Action Listeners?
  - (x) What is the significance of static keyword in Java programming?