Sample Question Format
(For all courses having end semester Full Mark=50)

KIIT Deemed to be University
Online End Semester Examination(Spring Semester-2021)

Subject Name & Code: Web Technology – IT-2004
Applicable to Courses:

Full Marks=50   **Time:2 Hours**

SECTION-A(Answer All Questions. Each question carries 2 Marks)

Time:30 Minutes   **(7×2=14 Marks)**

Question No	Question Type (MCQ/SAT)	Question	CO Mapping	Answer Key (For MCQ Questions only)
Q.No:1	MCQ	Find the output of the following program: ```java\nclass Demo\n{\n public static void main(String[] args)\n {\n int a, b, c;\n a = 10; b = 0;\n System.out.print("Hello World. ");\n c = a/b;\n System.out.println(a);\n System.out.println(b);\n System.out.println(c);\n }\n}\n``` 1. NaN 2. 10, 0 3. Hello World 4. Arithmetic Exception: / by zero	2	4
	MCQ	Find the output of the following program: ```java\npublic class X\n{\n public static void main(String [] args)\n {\n try\n {\n Method();\n System.out.print("A");\n }\n catch (Exception ex)\n {\n System.out.print("B");\n }\n finally\n {\n System.out.print("C");\n }\n System.out.print("D");\n }\n public static void Method()\n {\n throw new Error();\n }\n}\n```	4	2

		1. ABCD 2. C is printed before exiting with an error message 3. Compilation Fails 4. BC is printed before exiting with an error message.		
| | MCQ | What will be the output of the following java program:<br><br>```java
interface calculate
{
    void cal(int item);
}
class display implements calculate
{
    int x;
    public void cal(int item)
    {
        x = item + item;
    }
}
class interfaces
{
    public static void main(String args[])
    {
        display arr = new display();
        arr.x = 0;
        arr.cal(3);
        System.out.print(arr.x);
    }
}
```<br><br>1. 9<br>2. 6<br>3. 12<br>4. None of the above | 4 | 2 |
| | MCQ | Find the output of the following java program:<br><br>```java
class Conversion
{
    public static void main(String args[])
    {
        byte b;
        int i = 257;
        double d = 323.142;
        b = (byte) i;
        i = (int) d;
        b = (byte)d;
        System.out.print(b+" "+i);
    }
}
```<br><br>1. 67   323<br>2. 66   323<br>3. 56   324<br>4. 54   325 | 2 | 1 |
| **Q.No:2** | MCQ | Find the output of the following program:<br><br>```java
class Promote1
{
    public static void main(String args[])
    {
        byte b = 42;
        char c = 'a';
        short s = 1027;
        int i = 40000;
        float f = 5.67f;
        double d = .2345;
        double result = (f * b) + (i / c) - (d * s);
        System.out.println(result);
    }
}
``` | 2 | 1 |

		1. 409.3085146484375 2. 401.7982543 3. 306.8765423 4. 395.1287635		
| | MCQ | Find the output of the following program:<br><br>```java
class Promote
{
    public static void main(String args[])
    {
        byte b = 42;
        char c = 'k';
        short s = 1027;
        int i = 40000;
        float f = 5.69f;
        double d = .2345;
        double result = (f * b) + (i / c) - (d * s);
        System.out.println(result);
    }
}
```<br><br>1. 368.5884796875<br>2. 371.14848046875<br>3. 369.879289823<br>4. 458.765478632 | 2 | 2 |
| | MCQ | Find the output of the following program:<br><br>```java
class Promote
{
    public static void main(String args[])
    {
        byte b = 22;
        char c = 'P';
        short s = 1027;
        int i = 40000;
        float f = 4.69f;
        double d = .2345;
        double result = (f * b) + (i / c) - (d * s);
        System.out.println(result);
    }
}
```<br><br>1. 325.7584796875<br>2. 311.5148046875<br>3. 362.34849267578124<br>4. 456.825478632 | 2 | 3 |
| | MCQ | Find the output of the following program:<br><br>```java
class Promote
{
    public static void main(String args[])
    {
        byte b = 45;
        char c = 'B';
        short s = 1027;
        int i = 15000;
        float f = 4.69f;
        double d = .2345;
        double result = (f * b) + (i / c) - (d * s);
        System.out.println(result);
    }
}
```<br><br>1. 197.21848779296877<br>2. 195.5148046875<br>3. 194.3484456757 | 2 | 1 |

		4. 216.828978632		
Q.No:3	MCQ	Which of the following is an incorrect statement about packages? A. Package defines a namespace in which classes are stored B. A package can contain other package within it C. Java uses file system directories to store packages D. A package can be renamed without renaming the directory in which the classes are stored	4	D
	MCQ	Which of the following is false statement about package in java? A. Packages are used for preventing naming conflicts B. Providing controlled access: protected and default have package level access control. C. Packages cannot be considered as data encapsulation D. Both B and C	4	C
	MCQ	Which of these access specifiers can be used for a class so that it's members can be accessed by a different class in the different package? A. Public B. Protected C. Private D. No Modifier	4	A
	MCQ	Which of the following statement is true? A. An interface can extend only one class. B. An interface can extend any number of classes. C. A interface can extend only one interface. D. An interface can extend any number of interfaces.	4	D
Q.No:4	MCQ	A class Myclass is contained in package P1, contained in package P2, which is contained in Package P3, and which is further contained in the java package. For importing the class, which of the following is correct?	4	C

		A. import class Myclass; B. import Myclass.P1.P2.P3 C. import java.P1.P2.P3.Myclass; D. import Myclass.java.P1.P2.P3;		
	MCQ	Which of the following is true for multiple catch block? A. The super class exception cannot be caught first. B. Either the super or subclass can be caught first. C. The superclass exception must be caught first. D. None of these.	4	A
	MCQ	Which of the following statements are correct regarding the finally block? A. It is a block of statements that must be executed even if exception occurs. B. It is the block that has a constant number of statements. C. It is the final block for dealing with re thrown exceptions. D. None of these is true.	4	A
| | MCQ | What will be the output of the following java program:<br><br>```java
class compute
{
    public static void main(String[] args)
    {
        try
        {
            return;
        }
        catch(Exception e)
        {
            System.out.println("catch block");
        }
        finally
        {
            System.out.println("finally block");
        }
    }
}
```<br>A. catch block<br>   finally block<br>B. catch block<br>C. finally block<br>D. None of the above | 4 | C |
| Q.No:5

MCQ | | Which among the following code is correct to create an email link:
  A. <a
     Href="mailto:someone@example.com">
  B. <mail
     Href="someone@example.com">
  C. <a
     Href="someone@example.com">
  D. None of the above | 1 | 1 |

	MCQ	What is the use of <iframe> tag in html.
		   A. To display a web page within a web page.
		   B. To specify an inline frame.
		   C. Both (a) and (b)
		   D. None of the above
			1	C

	MCQ	Which among the following is the correct html code for putting a background image in an html document?
		   A. body background= "image.gif">
		   B. <image background= "image.gif">
		   C. <background>"image.gif"</background>
		   D. None of the above
			1	A

	MCQ	What is meant by an Anchor tag in html?
		   A. It is used to open a URL in a new tab.
		   B. It is used to link two sections or two web pages.
		   C. There is no such thing as an Anchor tag in HTML.
		   D. None of the above
			1	B
| **Q.No:6** | MCQ | Which of the following statements are true with regard to the following code?<br><br>```java
class hello
{
    public static void main(String args[])
    {
        String  Str1="Delhi-";
        int n = 110024;
        String Str2 = Str1 + n;
        System.out.println(Str2);
    }
}
```<br><br>A. It is a wrong code.<br>B. The code results in Str2 equal to "Delhi-110024"<br>C. The code will not compile.<br>D. n will be neglected and it will make Str2 = "Delhi-"; | 5 | B |
| | | Which of the following statements are true with regard | | |

		to the following code?		
| | MCQ | ```
class hello2
{
    public static void main(String args[])
    {
        char Array [] = {'P', 'A', 'R', 'T'};
        String Str = new String(Array,1,3);
        System.out.println(Str);
    }
}
```<br><br>A. The code will give the output as - ART<br>B. It is a wrong code<br>C. It will give IndexOutOfBoundsException.<br>D. It will give StringIndexOutOfBoundsException. | 5 | A |
	MCQ	Which of the following statements is not correct for the declaration of an array?
		
		A. int [] array[] = new int [2][3];
		B. int [] brray[] = new int [2] [];
		C. int [] prray[] = new int [][2];
		D. int [] nrray[] = new int [][]
		{
		    {1,2,3},{4,5,6}
		};
			2	C

	MCQ	Which of the following statement are correct in java? A. A class declared public can be accessed by its subclass only. B. A class declared public can be accessed by classes in its own package only. C. A class declared public can be accessed by any class in any package. D. A class declared public can be accessed by public classes in its own directory only.	3	C
Q.No:7	MCQ	Which of the following classes is used to read characters in a file? A. FileWriter B.FileInputStream C.InputStreamReader D. FileReader	5	D
		What will be the output of the following code:		

MCQ	A. 7 23 B. 7 7 C. 8 8 D. 8 24	5	A
MCQ	Which of the following code can be used to print your name in an applet? A. drawLine(myName, 20, 20) B. drawText(myName) C. drawLetters(20, 20, myName) D. drawString(myName, 20, 20);	6	D
MCQ	When an applet is terminated, the following sequence of methods calls take place? A. stop(), paint(), destroy() B. destroy(), stop(), paint() C. destroy(), stop() D. stop(), destroy()	6	D

```
class StringBufferDemo
{
    public static void main(String args[])
    {
        StringBuffer sb = new StringBuffer("Kalinga");
        System.out.print(sb.length()+"    ");
        System.out.println(sb.capacity());
    }
}
```

SECTION-B **(Answer Any Three Questions. Each Question carries 12 Marks)**

Time: 1 Hour and 30 Minutes   **(3×12=36 Marks)**

Question No	Question	CO Mapping (Each question should be from the same CO(s))
Q.No:8	**A.** what is a nested class in Java? What are its different types? Write a program in java showing the working of inner class. **5 Marks** **B.** Create an html form using the following fields -	

	Name -textbox
	Address -text area
	Sex -RadioButton
	          (For male and Female)
	Hobbies -CheckBox
	               (minimum two)
	Qualification -Select Option
	Usee Id -textbox
	Password -password field
	Submits Button -button
	Clear Button -button
	7 Marks
		3, 1

	A. write a java program that uses recursive procedure to print the nth value in the Fibonacci sequence. The value of nth number must be accepted from the keyboard. **5 Marks** **B.** Define a class Department with data members DName, HoDName and methods constructor and PrintDepartmentDetails(). Then, define another class StaffMember that extends the class department and which contains data members staffName, staffQulification, and methods constructor, and PrintStaffDetails(). Create object of the sub class and test the program. **7 Marks**	2,3
	A. Create a Base class Employee with constructor and two child classes Regular_Employee and Contract_Employee with constructors. The data member and methods will be defined by you. Now within the constructor of the sub class, invoke the constructor or the base class using super(). **6 Marks** **B.** Write a program which will overload the area () method and display the area of a circle, triangle and square as per user choice and user entered dimensions. **6 Marks**	3
Q.No:9	**A.** Create an interface currency that contain two methods moneyconversion() and countrycurrency(). Create another class named CurrencyConversion that implemets the currency interface and overrides its methods(). In the main method create an object of the class to invoke the methods and test it. **6Marks** **B.** Create a package Department having a class Student. The students class is having the data member – name, semester, branch, roll-no,	4

	cgpa. The class is also having a constructor and a show() method which is used to display the various attributes of student object. Finally design an application class Demo where the above package is imported and functionality of Student class is tested. **6 Marks**	
	A. Write an interface called Numbers with a method int-Process(int x, int y). Write a class called Sum in which the process() method finds the sum of two numbers and returns an int value. Write another class called Average in which the process() method finds the average of the two numbers and retuns an int value. **5 Marks** **B.** Explain the use of package in java? Write a program in java which will illustrate the functionality of all access specifier i.e. public, private, protected and default. **7 Marks**	4
	A. What is dynamic method dispatch? Write a program in java to illustrate it. **6 Marks** **B.** Write a java program to create an abstract class named shape that contains two integers and an empty method named print Area(). Provide two classes named Rectangle and Triangle such that each one of the classes extends the class shape. Each one of the class contains only the method print Area() that print the area of the given shape. **6 Marks**	3

Q.No:10	**A.** Write a program in java to enter the number through command line argument, if first and second number is not entered it will generate the exception. Also divide the first number with second number and generate the arithmetic exception. **6 Marks**
	
	B. Write a program in java which will accept a string from the keyboard and do the following operations:
	   A. Display the string in the upper case.
	   B. Find out the length of the string
	   C. Reverse the string
		4,5

	D. Display the substring from 2nd to 5th position E. Count the number of vowels in the string **6 Marks**	
	A. What is difference between Checked and Unchecked Exception in Java? Write a program in java which will accept the value of marks from the keyboard and check if the marks is <0 or >100, then the program will display the message – "Invlaid Marks", otherwise the correct marks will be displayed to the user. Implement this using user defined exception. **6 Marks** **B.** Write a program in java to perform following operations on a user entered String. A. Count the number of words in the String. B. count the number of vowel in the String C. sort the string in alphabetical order. D. display the length of the string.	4,5
	A. Write a class Temperature the converts temperature between Fahrenheit (F) and Celsius ©. The formulae for conversion between the two units are: - **fahrenheit** = (9.0*Celsius) / 5.0 + 32.0 - **Celsius** = (fahrenheit - 32.0) * 5.0/9.0 The program should throw an exception of the type NumberFormatException if the number of degrees is not a legal floating point number. The program should check the data from the command line and give suitable feedback. **6 Marks** **B.** Write a program in java which will demonstrate the use of following methods: insert(), append(), replace(), delete() **6 Marks**	4,5
Q.No:11	**A.** What is an Applet in java? How does it differ from application? Write an applet program that displays a simple message using	

	paint() method. **5 Marks** **B.** Write a java program in which data is read from one file and should be written in another in byte format. Filename of both file is given through command line arguments. **7 Marks**	6,5
	A. Difference between Reader / Writer and InputStream / Output Stream? Also differentiate between String and StringBuffer class. **6 Marks** **B.** What are the restrictions imposed on java applet? Write a program in java applet showing the implementation of all the methods of its life cycle. **6 Marks**	5, 6
	A. Write a java program using applet to draw Oval, Rectangle, Line and fill the color in it. **5 Marks** **B.** Write a java program that reads a file name from the user then displays information about whether the file exists, whether the file is readable, whether the file is writable, type of file and the length of the file in bytes. The Program will also display the number of characters, lines and words in a text file. **7 Marks**	6,5