Total No. of Questions: 6 *Total No. of Printed Pages:3*

Enrollment No.....

Faculty of Engineering / Science

End Sem (Even) Examination May-2022

CA3CO14 Object Oriented Technology

Programme: BCA / BCA+MCA (Integrated) Branch/Specialisation: Computer Application

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1 i. Java is which type of language- **1**

(a) Weakly typed (b) Strongly typed

(c) Moderate typed (d) None of these

ii. In Java byte, short, int and long all of these are- **1**

(a) Signed (b) Unsigned

(c) Both (a) and (b) (d) None of these

iii. What is the result of compiling and running the following code? **1**

```
public class Test{
    public static void main(String[] args){
        int[] a = new int[0];
        System.out.print(a.length);
    }
}
```

(a) 0

(b) Compilation error, arrays cannot be initialized to zero size.

(c) Compilation error, it is a.length() not a.length

(d) None of these

iv. The output of the following fraction of code is- **1**

```
public class Test{
    public static void main(String args[]){
      String s1 = new String("Hello");
      String s2 = new String("Hellow");
      System.out.println(s1 = s2);
      }
}
```

(a) Hello (b) Hellow

(c) Compilation error (d) Throws an exception

v. Which keyword is used to explicitly throw an exception? **1**
(a) Try (b) Throwing (c) Catch (d) Throw

vi. In java a thread can be created by: **1**
(a) Extending the Thread class
(b) Implementing Runnable interface.
(c) Both (a) and (b)
(d) None of these

vii. Which is the container that doesn't contain title bar and MenuBars but it can have other components like button, textfield etc? **1**
(a) Window (b) Frame (c) Panel (d) Container

viii. Where are the following four methods commonly used? **1**
I. Public void add(Component c)
II. Public void setSize(int width,int height)
III. Public void setLayout(LayoutManager m)
IV. Public void setVisible(boolean)
(a) Graphics class (b) Component class
(c) Both (a) and (b) (d) None of these

ix. Which of these events will be notified if scroll bar is manipulated? **1**
(a) ActionEvent (b) ComponentEvent
(c) AdjustmentEvent (d) WindowEvent

x. What is a listener in context to event handling? **1**
(a) A listener is a variable that is notified when an event occurs
(b) A listener is a object that is notified when an event occurs
(c) A listener is a method that is notified when an event occurs
(d) None of these

Q.2 i. Java is platform-independent and portable. Justify. **2**
ii. Describe the Java environment with diagram. **3**
iii. List out the looping statements available in Java. Explain break and continue statements with example. **5**
OR iv. Describe the decision-making statements available in Java. Explain with example. **5**

Q.3 i. Write short note on abstract and static keyword. **2**
ii. What is an array? Describe one-dimension and two-dimension array with syntax. **3**

iii. Differentiate between classes and interface. Give syntax of class and interface. **5**
OR iv. Write short note on method overloading and method overriding. Give example of each of them. **5**

Q.4 i. Write short note on throw and throws. **2**
ii. Explain java thread model with diagram. **3**
iii. What is exception? Write a program to create your own exception. **5**
OR iv. What is thread? Write a program to create a thread with the help of Runnable interface. **5**

Q.5 i. Write short note on container and component. **2**
ii. Write short note on following controls of AWT and give syntax: **3**
(a) Labels (b) Check Box (c) Choice
iii. What is a layout manager explain Border Layout with an example? **5**
OR iv. Describe list control of AWT. Write a program to create list in AWT. **5**

Q.6 Attempt any two:
i. Describe delegation event model with block diagram. **5**
ii. Write a program to create a list and add item listener to it**.** **5**
iii. Write a program to create a simple JPanel add any four components to it. **5**

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Marking Scheme

CA3CO14 Object Oriented Technology

Q.1	i.	(b) Strongly typed		**1**
	ii.	(c) Both (a) and (b)		**1**
	iii.	(a) 0		**1**
	iv.	(b) Hellow		**1**
	v.	(d) Throw		**1**
	vi.	(c) Both (a) and (b)		**1**
	vii.	(c) Panel		**1**
	viii.	(b) Component class		**1**
	ix.	(c) Adjustment Event		**1**
	x.	(b) A listener is a object that is notified when an event occurs		**1**
Q.2	i.	Justification	2 Marks	**2**
	ii.	Java environment with diagram		**3**
		Description of Java environment	2 Marks	
		Diagram	1 Mark	
	iii.	Looping statements available in Java		**5**
		Description of Looping statements	3 Marks	
		Break and continue statements example	2 Marks	
OR	iv.	Decision-making statements available in Java		**5**
		Description of Decision-making statements	2 Marks	
		Example	3 Marks	
Q.3	i.	Definition abstract	1 Mark	**2**
		Definition static	1 Mark	
	ii.	Description of array	1 Mark	**3**
		Describe one-dimension and two-dimension array	1 Mark	
		Syntax	1 Mark	
	iii.	Differentiate between classes and interface		**5**
		Description of Class	1.5 Marks	
		Description of interface	1.5 Marks	
		Syntax of class and interface	1 Mark	
		Syntax of class interface.	1 Mark	
OR	iv.	Overloading and method overriding		**5**
		Description of method overloading	1.5 Marks	
		Description of method overriding	1.5 Marks	
		Example of overloading and overriding	2 Mark	
Q.4	i.	Throw and throws.		**2**
		Description of throw	1 Mark	
		Description of throws	1 Mark	
	ii.	Java thread model with diagram		**3**
		Java thread model	2 Marks	
		Diagram	1 Mark	
	iii.	Exception		**5**
		Description of exception	2 Marks	
		Program		
		(Correct syntax 2 Marks, correct output 1 Mark)	3 Marks	
OR	iv.	Thread		**5**
		Description of thread	2 Marks	
		Program		
		(Correct syntax 2 Marks, correct output 1 Mark)	3 Marks	
Q.5	i.	Container and component.		**2**
		Description of Container	1 Mark	
		Description of component	1 Mark	
	ii.	Description of Labels	1 Mark	**3**
		Description of check Box	1 Mark	
		Description of choice	1 Mark	
	iii.	Layout manager		**5**
		Description of Layout manager	2 Marks	
		Example of Border Layout		
		(Correct syntax 2 Marks, correct output 1 Mark)	3 Marks	
OR	iv.	Control of AWT		**5**
		Description of AWT control	2 Marks	
		Program		
		(Correct syntax 2 Marks, correct output 1 Mark)	3 Marks	
Q.6		Attempt any two:		
	i.	Delegation event model		**5**
		Explanation of Delegation event model	3 Marks	
		Block diagram.	2 Marks	
	ii.	Program		**5**
		(Correct syntax 3 Marks, correct output 2 Marks)	5 Marks	
	iii.	Program		**5**
		(Correct syntax 3 Marks, correct output 2 Marks)	5 Marks	

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