

B.TECH./CSE/ODD/SEM5/CS(IT)504A/2019-2020
PAPER TYPE: REGULAR(R18)
YEAR: 2021

OBJECT ORIENTED PROGRAMMING USING JAVA
CS (IT) 504A

TIME ALLOTTED: 3 HOURS

FULL MARKS: 70

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable

GROUP – A
(Multiple Choice Type Questions)

1. Answer any **ten** from the following, choosing the correct alternative of each question: **10×1=10**

| SL. NO. | Question | Marks | CO No. |
|---------|---|-------|--------|
| (i) | Exception is defined in which package? a. Java.util b. Java.awt c. Java.io d. Java.lang | 01 | CO1 |
| (ii) | Java is a _____ language a. Strongly typed b. Moderate typed c. Weekly typed d. None of these | 01 | CO1 |
| (iii) | What will be the output: Int arr[]=new int[5]; arr=new int[6]; a. The code has compile errors because the variable arr cannot be changed once it is assigned. b. The code has runtime errors because the variable arr cannot be changed once it is assigned. c. The code can compile and run fine. The second line assigns a new array to arr. d. The code has compile errors because we cannot assign a different size array to arr. | 01 | CO1 |
| (iv) | String in Java is a? a. Class b. Object c. Variable d. character array | 01 | CO2 |
| (v) | class Base { public void show() { System.out.println("Base::show() called"); } } | 01 | CO2 |

- ```

}
class Derived extends Base {
 public void show() {
 System.out.println("Derived::show() called");
 }
}
}
public class Main {
 public static void main(String[] args) {
 Base b = new Derived();
 b.show();
 }
}

```
- a. Derived::show() called  
b. Base::show() called  
c. Compile time error  
d. Run time error
- (vi) Automatic type conversion in Java takes place when. 01 CO1
- a. Two types are compatible and size of destination type is shorter than source type.  
b. Two types are compatible and size of destination type is equal of source type.  
c. Two types are compatible and size of destination type is larger than source type.  
d. All of the above
- (vii) In java Scanner is a 01 CO5
- a. Class  
b. Object  
c. Variable  
d. Method
- (viii) class Main { 01 CO5  
 public static void main(String args[]) {  
 try {  
 throw 10;  
 }  
 catch(int e) {  
 System.out.println("Got the Exception " + e);  
 }  
 }  
}
- a. Got the Exception 10  
b. Got the Exception 0  
c. Compiler Error  
d. Run time error
- (ix) super keyword always refers to 01 CO1
- a. Derived class  
b. Base class  
c. Immediate base class.  
d. All of the above

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- |       |                                                                                                                                                                                                                                                                                                                                       |    |     |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|
| (x)   | Which of these is a super class of all errors and exceptions in the Java language?                                                                                                                                                                                                                                                    | 01 | CO2 |
|       | <ul style="list-style-type: none"> <li>a. RuntimeExceptions</li> <li><b>b. Throwable</b></li> <li>c. Catchable</li> <li>d. None of the above</li> </ul>                                                                                                                                                                               |    |     |
| (xi)  | Which of the following is/are advantages of packages?                                                                                                                                                                                                                                                                                 | 01 | CO1 |
|       | <ul style="list-style-type: none"> <li>a. Packages avoid name clashes</li> <li>b. Classes, even though they are visible outside their package, can have fields visible to packages only</li> <li>c. We can have hidden classes that are used by the packages, but not visible outside.</li> <li><b>d. All of the above</b></li> </ul> |    |     |
| (xii) | Which of this method of String class is use to obtain character at specified index?                                                                                                                                                                                                                                                   | 01 | CO1 |
|       | <ul style="list-style-type: none"> <li>a. char()</li> <li>b. Charat()</li> <li>c. charat()</li> <li><b>d. charAt()</b></li> </ul>                                                                                                                                                                                                     |    |     |

**GROUP – B**  
(Short Answer Type Questions)

(Answer any *three* of the following) **3 x 5 = 15**

- |    |                                                           |    |     |
|----|-----------------------------------------------------------|----|-----|
| 2. | Explain the life cycle of applet.                         | 05 | CO3 |
| 3. | Why java is called architecture neutral language?         | 05 | CO1 |
| 4. | What is inner class in java? Explain with example.        | 05 | CO2 |
| 5. | Why main () is preceded by keyword “public static void “? | 05 | CO1 |
| 6. | Explain the purpose of this keyword with example code.    | 05 | CO2 |

**GROUP – C**  
(Long Answer Type Questions)

(Answer any *three* of the following) **3 x 15 = 45**

- |    |       |                                                                                                                                                                                |    |     |
|----|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|
| 7. | (i)   | What are the benefits of organizing classes into package?                                                                                                                      | 04 | CO2 |
|    | (ii)  | Create a user define package namely P and add a user define class “BubbleSort” which sort the elements in an array. Then import that package in your program to sort an array. | 06 | CO5 |
|    | (iii) | What is the difference between length() and length in java?                                                                                                                    | 05 | CO1 |
| 8. | (i)   | Explain the use of “final”, “finally” and finalize” keyword.                                                                                                                   | 05 | CO2 |

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|     |       |                                                                                                                                       |    |     |
|-----|-------|---------------------------------------------------------------------------------------------------------------------------------------|----|-----|
|     | (ii)  | Explain thread lifecycle.                                                                                                             | 05 | CO2 |
|     | (iii) | What do you mean by synchronization between threads? How we implement synchronization between two threads? Explain with example code. | 05 | CO2 |
| 9.  | (i)   | What is var-args (variable-length arguments)? Explain the utility of var-args with example code.                                      | 05 | CO2 |
|     | (ii)  | Why string is called immutable?                                                                                                       | 05 | CO2 |
|     | (iii) | What is the difference between sleep and wait method?                                                                                 | 05 | CO2 |
| 10. | (i)   | What is inheritance in java? How to implement inheritance in java? Explain with code.                                                 | 05 | CO1 |
|     | (ii)  | Explain the utility of super keyword with example code.                                                                               | 05 | CO1 |
|     | (iii) | Explain the differences between interface and abstract class.                                                                         | 05 | CO1 |
| 11. | (i)   | What is the difference between throw and throws keyword? Explain with example code.                                                   | 05 | CO2 |
|     | (ii)  | What is default constructor? What is does?                                                                                            | 05 | CO1 |
|     | (iii) | Differentiate between static binding and dynamic binding.                                                                             | 05 | CO2 |