

**CMR TECHNICAL CAMPUS
UGC AUTONOMOUS**

**B. Tech. III Semester Regular/Supply End Examinations, Feb-2023
OOPS Through Java**

Common to CSE, IT, CSM, CSD, CSG, AIML

Time: 3 Hours

Max. Marks: 70

Note

- i. This Question paper contains Part- A and Part- B.
- ii. All the Questions in Part A are to be answered compulsorily.
- iii. All Questions from Part B are to be answered with internal choice among them.

PART-A

10 X 02 = 20 Marks

| | | Marks | CO | BL |
|----|---|-------|-----|----|
| 1. | a | 02 | CO1 | L1 |
| | b | 02 | CO1 | L1 |
| | c | 02 | CO2 | L1 |
| | d | 02 | CO2 | L2 |
| | e | 02 | CO3 | L2 |
| | f | 02 | CO3 | L2 |
| | g | 02 | CO4 | L2 |
| | h | 02 | CO4 | L2 |
| | i | 02 | CO5 | L1 |
| | j | 02 | CO5 | L2 |

PART- B

5 X 10 = 50 Marks

| | | Marks | CO | BL |
|----|-----------|-------|-----|----|
| 2. | a | 05 | CO1 | L2 |
| | b | 05 | CO1 | L1 |
| | OR | | | |
| 3. | a | 05 | CO1 | L2 |
| | b | 05 | CO1 | L3 |

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|----|---|---|----|-----|----|
| 4 | a | What is a package? Explain the process of importing and accessing package with example program. | 05 | CO2 | L2 |
| | b | How to implement interfaces? Illustrate Nested interfaces clear examples? | 05 | CO2 | L3 |
| OR | | | | | |
| 5 | a | Analyze Reading console Input and Writing Console Output with an example? | 05 | CO2 | L4 |
| | b | Discuss about various Random access file operations? | 05 | CO2 | L2 |
| 6 | a | With a suitable Java program explain user-defined exception handling. | 05 | CO3 | L3 |
| | b | What is meant by re-throwing exception? Discuss a suitable scenario for this | 05 | CO3 | L3 |
| OR | | | | | |
| 7 | a | What is Multithreading? What are the ways to create multiple threads in Java? | 05 | CO3 | L2 |
| | b | Write a program to create three threads in your program and context switch among the threads using sleep functions. | 05 | CO3 | L3 |
| 8 | a | What is the need of String Tokenizer? Discuss the methods of Stack class. | 05 | CO4 | L2 |
| | b | Differentiate between ArrayList and Vector? | 05 | CO4 | L2 |
| OR | | | | | |
| 9 | a | Discuss about the following: (i) Date (ii) Calendar (iii) Random (iv) Formatter | 10 | CO4 | L2 |
| 10 | a | What is the significance of layout managers? Discuss briefly various layout managers. | 05 | CO5 | L2 |
| | b | Write an Applet to draw a smiley picture accept user name as a parameter and display welcome message. | 05 | CO5 | L3 |
| OR | | | | | |
| 11 | a | With a Neat diagram, Explain MVC architecture | 05 | CO5 | L2 |
| | b | Write an applet program to handle all mouse events | 05 | CO5 | L3 |

CO : Course Outcomes

BL : Bloom's Taxonomy Levels

L 1 : Remembering

L 2 : Understanding

L 3 : Applying

L 4 : Analysing

L 5 : Evaluating

L 6 : Creating

- | | | | | | |
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**CMR TECHNICAL CAMPUS
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B.Tech - III Semester, Supply Examinations, July-2022

**OOPS Through Java [20CS303PC]
(Common to CSE, CSD, CSM & IT)**

Time: 3 Hours

Max. Marks: 70

**Answer Any Five Questions
All Questions Carry Equal Marks**

5 X 14 = 70 Marks

1. a. Explain the concept of OOP? List the features of OOP and explain in detail? [7M]
b. Develop a program to convert the given temperature in Fahrenheit to Celsius using the following conversion formula $C = (F - 32)/1.8$ And display the values in a tabular form. [7M]
2. a. Demonstrate with an example how to implement multiple Inheritance in java? [7M]
b. What is polymorphism? Differentiate between method overloading and method overriding with an example. [7M]
3. a. How to create a package? Explain about the access protection in packages? [7M]
b. Compare Byte Stream Classes and Character Stream Classes with suitable examples? [7M]
4. a. How to design and implement an interface in Java? Explain with an example? [7M]
b. Explain the concept of Random-access file operations in detail? [7M]
5. a. Develop a program to create four threads using Runnable interface. [7M]
b. Develop a java program that illustrates the application of multiple catch statements. [7M]
6. a. Explain exception handling in detail with suitable example? [7M]
b. How multithreading in single processor system is different from multithreading in multiprocessor system. Explain? [7M]
7. a. Discuss the concept of the Legacy Classes in detail? [7M]
b. Explain the purpose of String Tokenizer with an example? [7M]
8. a. In what way JList differ from JComboBox? [5M]
b. What are the various components of Swing? Explain? [9M]

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**OOPS Through Java[20CS303PC]
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Time: 3 Hours

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**Answer Any Five Questions
All Questions carry Equal Marks**

5 X14 = 70 Marks

1. a Explain the usage of super keyword in Java. [7M]
b Write a Java program to create and access a two Dimensional Array. [7M]
2. a What is a constructor ? Explain. [5M]
b Write a Java program to illustrate the parameterized constructor. [9M]
3. a Write a Java program to copy contents of one file to another. [7M]
b. Explain the access modifiers in Java. [7M]
4. Describe the process of importing and accessing a package with suitable examples. [14M]
5. a. What is finally block ? Explain. [5M]
b. Write a Java program to demonstrate Exceptional handling using finally block.[9M]
6. a. Briefly explain thread priorities. [5M]
b. Write a Java program to illustrate thread priorities. [9M]
7. a. Write a Java program to demonstrate LinkedList. [8M]
b. What are the similarities and differences between ArrayList and Vector ? Explain. [6M]
8. a. Explain the MVC architecture. [7M]
b. What are the various components of Swing? Explain. [7M]

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PART-A

10 X 02 = 20 Marks

| | Marks | CO | BL |
|---|--------------|-----------|-----------|
| 1. a Differentiate between class and object | 02 | CO1 | L2 |
| b Write the Syntax of defining Class in Java? | 02 | CO1 | L1 |
| c How to implement interfaces in Java? | 02 | CO2 | L3 |
| d Recall Various types of operations that are performed on Files? | 02 | CO2 | L1 |
| e List any three built-in exceptions in Java | 02 | CO3 | L1 |
| f How does Java support inter thread communication? | 02 | CO3 | L2 |
| g What are the methods defined by Vector? | 02 | CO4 | L1 |
| h Write the Major uses of Priority Queue? | 02 | CO4 | L2 |
| i What are the merits of swing components over AWT? | 02 | CO5 | L2 |
| j Give the hierarchy for swing components | 02 | CO5 | L1 |

PART- B

5 X 10 = 50 Marks

| | Marks | CO | BL |
|--|--------------|-----------|-----------|
| 2. a What are the drawbacks of procedural languages? Explain the need of object oriented programming with suitable program | 05 | CO1 | L2 |
| b Create a class named Person. It should have data members: name, age, mobile number and place member functions: getData(), displayData(). Create another class named Employee to add professional details to Person class and display the data. | 05 | CO1 | L3 |
| OR | | | |
| 3. a What is inheritance? Classify different types of inheritance? | 05 | CO1 | L4 |
| b Add a new method in the base class of Shapes.java that prints a message, but don't override it in the derived classes. Explain what happens | 05 | CO1 | L3 |

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|----|---|--|----|-----|----|
| 4 | a | what is package? Explain how to create user defined package in java? | 05 | CO2 | L3 |
| | b | What is an interface? List the rules to create an interface in java with examples? | 05 | CO2 | L2 |
| OR | | | | | |
| 5 | a | Classify different types of Streams and Explain about them? | 05 | CO2 | L2 |
| | b | How to implement Serialization & Enumerations in Java? | 05 | CO2 | L3 |
| 6 | a | Give the difference between checked and unchecked exceptions? | 05 | CO3 | L2 |
| | b | Write a program to illustrate the use of multiple catch blocks for a try block | 05 | CO3 | L2 |
| OR | | | | | |
| 7 | a | Does Java support thread priorities? Justify your answer with suitable discussion | 05 | CO3 | L3 |
| | b | Write a java program to create two threads and execute simultaneously. | 05 | CO3 | L3 |
| 8 | a | What is a vector? How does it differ from array, list? | 05 | CO4 | L2 |
| | b | Write a program to count number of words in a given sentence | 05 | CO4 | L3 |
| OR | | | | | |
| 9 | a | Discuss about Hash table? Mention its Properties. | 05 | CO4 | L2 |
| | b | Write a Program for Accessing a Collection via an Iterator. | 05 | CO4 | L3 |
| 10 | a | Is Applet more secure than application program? Justify your answer. | 05 | CO5 | L3 |
| | b | Design a user interface to collect data from the student for admission application using swing components. | 05 | CO5 | L3 |
| OR | | | | | |
| 11 | a | Explain the life cycle of an applet. | 05 | CO5 | L2 |
| | b | Write an applet to display the mouse cursor position in that applet window | 05 | CO5 | L3 |

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