Code No.: CS304PC | R20 | H.T.No. | | | 8 | R | | | | | |

# CMR ENGINEERING COLLEGE: : HYDERABAD
## UGC AUTONOMOUS
## II–B.TECH–I–Semester End Examinations (Regular) - February- 2023
## OBJECT ORIENTED PROGRAMMING THROUGH JAVA
## (Common to CSE, AI&DS and IT)

**[Time: 3 Hours]** **[Max. Marks: 70]**

**Note:** This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A** **(20 Marks)**

| | | |
|---|---|---|
| 1. a) | List out the features of java. | [2M] |
| b) | Define pure polymorphism. | [2M] |
| c) | Summarize the steps to implement an interface. | [2M] |
| d) | Write the benefits of streams in java. | [2M] |
| e) | State the use of try and catch blocks. | [2M] |
| f) | Distinguish between throw and throws. | [2M] |
| g) | Define Array List with syntax. | [2M] |
| h) | Define random class. | [2M] |
| i) | Distinguish between swings Vs AWT? | [2M] |
| j) | What are the applet security issues? | [2M] |

**PART-B** **(50 Marks)**

| | | |
|---|---|---|
| 2. | Explain about Class, Objects and Methods in Java with an example program. | [10M] |
| | **OR** | |
| 3. | What is an array? Discuss one dimensional & two dimensional arrays. Write a program for declaring & initializing two dimensional arrays | [10M] |
| 4. | Define a package. How do create a package? Describe the access protection in packages. | [10M] |
| | **OR** | |
| 5.a) | How to extend interfaces in java? Explain with example. | [5M] |
| b) | Discuss Byte Array Output Stream. | [5M] |
| 6. | What is an Exception? List out the keywords for exception handing and write steps to develop user defined exception. | [10M] |
| | **OR** | |
| 7. | Write a java program that creates three threads. First thread displays Machine Learning in every one seconds, the second thread displays Cloud Computing in every three seconds, and the third thread displays Software Engineering every four seconds. | [10M] |
| 8. | Briefly explain about collection algorithms in java. | [10M] |
| | **OR** | |
| 9. | Discuss about StringTokenizer class. Explain with an example. | [10M] |
| 10. | Compare and contrast Java AWT and Java Swing. Give a brief synopsis of methods and their description of component class widely used in swings. | [10M] |
| | **OR** | |
| 11.a) | Explain event handling using swings. | [5M] |
| b) | Write a java program that creates menu which appears similar to the menu of notepad application. | [5M] |

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