

Code No: 872AA

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA II Semester Examinations, March - 2023****JAVA PROGRAMMING****Time: 3 Hours****Max.Marks:75****Note:** i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A****(25 Marks)**

- 1.a) Illustrate type conversion and type casting in Java. [5]
- b) Differentiate between interface and abstract class. [5]
- c) What are the benefits of exception handling? [5]
- d) Discuss the limitations of abstract window toolkit. [5]
- e) How to perform thread synchronization? [5]

**PART – B****(50 Marks)**

2. Explain the need of object oriented programming paradigm and its concepts. [10]  
**OR**
- 3.a) Demonstrate the use of 'final' keyword.  
b) With an example, explain the concept of inner classes. [5+5]
4. Define polymorphism and discuss dynamic method dispatch. [10]  
**OR**
- 5.a) Describe member access rules for packages.  
b) Write a program to implement hierarchical inheritance. [5+5]
6. How to define an interface? Illustrate partial and total implementation of interfaces. [10]  
**OR**
- 7.a) Differentiate between throw and throws usage.  
b) Write a program to demonstrate nested by statements. [5+5]
8. With the help of a program explain delegation event model of Java. [10]  
**OR**
- 9.a) Create a login form using labels, text boxes and buttons.  
b) Describe Model-view-controller architecture. [5+5]
10. Discuss the advantages of applets over application program and life cycle of an applet. [10]  
**OR**
- 11.a) How to create multiple threads?  
b) Explain the purpose of wait() and notify() methods. [5+5]

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