

**R17**

**Code No: 843AE**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**MCA II Semester Examinations, March/April - 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) Discuss about various data types in Java. [5]
- b) Explain about using final with inheritance. [5]
- c) Describe exception hierarchy. [5]
- d) Explain about CheckboxGroup. [5]
- e) Discuss about the swing buttons. [5]

**PART – B**

**(50 Marks)**

- 2.a) Illustrate various control statements in JAVA.
  - b) Explain about overloading methods and constructors with examples. [5+5]
- OR**
- 3.a) Write a Java program to generate Fibonacci series using recursion concept.
  - b) Explain about string classes with examples. [5+5]
- 4.a) Distinguish between specialization and specification.
  - b) Describe the differences between classes and interfaces with examples. [5+5]
- OR**
- 5.a) What is an interface? Explain about implementing interfaces in detail.
  - b) Discuss about method overriding and abstract classes. [5+5]
- 6.a) What are built-in exceptions? Explain.
  - b) Explain about interthread communication in detail. [5+5]
- OR**
- 7.a) Discuss about thread life cycle and creating threads.
  - b) What is the use of try, catch, throw, throws and finally statements in JAVA? [5+5]

- 8.a) Explain about GridBagLayout class.  
b) Discuss about handling mouse and keyboard events. [5+5]

**OR**

- 9.a) What are constructors of TextField? Explain.  
b) Explain about the AWT class hierarchy in detail. [5+5]

10. Explain the following:  
a) Components and containers  
b) Limitations of AWT. [5+5]

**OR**

11. Explain the following:  
a) Creating applets  
b) Trees and JTable. [5+5]

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