

R15**Code No: 823AD****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA III Semester Examinations, June/July - 2018****JAVA PROGRAMMING****Time: 3hrs****Max.Marks:75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 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**5 × 5 Marks = 25**

- 1.a) Define autoboxing and unboxing. [5]
- b) Define the syntax for creation of inner class. [5]
- c) Differentiate treemap and hashmap. [5]
- d) Define daemon threads. [5]
- e) Define the syntax for checkbox with example. [5]

PART - B**5 × 10 Marks = 50**

2. Explain about the following
a) abstraction b) encapsulation c) dynamic binding d) inheritance [10]
- OR**
- 3.a) Write a short note on public, private and protected access specifiers.
b) Explain about copy constructor. [5+5]
- 4.a) What is a nested class? Differentiate between static nested classes and non-static nested classes.
b) How to define a package? How to access, import a package? Explain with examples. [5+5]

OR

- 5.a) Discuss various forms of inheritance.
b) Give an example for function overloading and explain. [5+5]
- 6.a) Illustrate with an example the usage of TreeSet and TreeMap classes.
b) Differentiate vector and arraylist with examples. [5+5]

OR

7. Explain collection framework with examples. [10]

- 8.a) What is meant by user-defined exceptions? Demonstrate with example.
b) Explain the procedures to create a new thread. [5+5]

OR

- 9.a) What is an exception? What are the benefits of exception handling?
b) Explain with suitable example java programs the following:
i) Rethrowing an exception. ii) Method Specifying exceptions. [5+5]

- 10.a) Explain delegation event model.
b) Write a JAVA program for handling key events. [5+5]

OR

11. Write a JAVA program that works as simple calculator. Use a grid layout to arrange buttons for digits and for the +, -, *, % operations. Add a text field to display the result. [10]

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