Code No: 823AD **R15**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA III Semester Examinations, August - 2017
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) What are the primary motivational factors for Java development? [5]
b) Differentiate between class, interface, abstract class. [5]
c) Compare HashSet and HashMap collection classes. [5]
d) What are the benefits of exception handling? [5]
e) What are the various sub classes of JToggleButton? [5]

PART - B

5 × 10 Marks = 50

2.a) Demonstrate the usage of 'this' keyword.
b) How does Java support abstraction? Give suitable code. [5+5]

OR

3.a) Can an object be passed as a parameter to a function? Justify your answer.
b) What is the main purpose of unboxing?
c) Is garbage collection is automatic in Java? [10]

4.a) Differentiate between method overloading and method overriding.
b) How to prevent inheritance of a class? [5+5]

OR

5.a) What is a nested class? Is it different from inner class?
b) Explain access modifiers applicable to packages. [5+5]

6. Write a program to merge the contents of two files into a target file and retain non-redundant words in the final file. [10]

OR

7. Write a socket program to establish connection and communication between a server and a client using TCP/IP sockets. [10]

8.a) Write a program to simulate nested try statements in exception handling.
b) Differentiate between 'throw' and 'throws' usage. [5+5]

OR

9.a) What is the need of thread synchronization? How is it achieved?
b) What is a daemon thread? What is its purpose? [5+5]

10.a) Describe Model-View-Controller architecture for application development.
b) What is the significance of adapter classes? [5+5]

OR

11. Write a program to handle keyboard events and explain delegation event model. [10]

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