Code No: 07A3EC06 **Set No.1**

II B.Tech. I Semester Regular Examinations, November -2008
OBJECT ORIENTED PROGRAMMING
(Common to Mechanical Engineering,Mechatronics,Production Engineering and Automobile Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the advantages of OOP compared to process-oriented?
   (b) Is C language supports abstraction? Explain with suitable examples. [8+8]
2. (a) Explain different ways of initializing 1-dimentional and 2-dimentional arrays.
   (b) Support the statement "java is a strongly typed language".
   (c) Explain the rules for writing recursive routines. [8+4+4]
3. (a) Explain with illustrative example program the usage of "super".
   (b) Explain instance of operator. Demonstrate with a simple program. [8+8]
4. (a) What is the difference between class and interface?
   (b) What is the difference between Abstract class and interface?
   (c) Write a program to demonstrate implementing two interfaces by a single class. [4+4+8]
5. Write short notes on the following;
   (a) Exception hierarchy
   (b) Deadlocks
   (c) Thread groups
   (d) Daemon threads. [4+4+4+4]
6. (a) List out commonly used listener interfaces and describe briefly the methods that they described.
   (b) Write a program to demonstrate handling various mouse events. [8+8]
7. (a) Explain different ways of executing applets in java.
   (b) Write an applet program that scrolls a message from right to left, across the applet's window. [6+10]
8. (a) What is the relation between IP address, socket and port?
   (b) Briefly explain the support for TCP and UDP in java.
   (c) Write a program to demonstrate the client/server communication that the username and password typed at client should be validated at server and a corresponding message should be printed at client. [3+3+10]

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Code No: 07A3EC06 **Set No.2**

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1. (a) Explain the diferent kinds of inheritances with illustrative figures.
   (b) Explain different kinds of abstractions with illustrations. [8+8]
2. (a) Support the statement "java is a architecturally neutral".
   (b) Can memory deallocation done programmatically.
   (c) Write a program to multiply two 3×3 matrices. [4+4+8]
3. (a) Can we declare variables of an abstrct class type. Explain.
   (b) Write a program to calculate the area and perimeters of circle, rectangle, square and traingle shapes using inheritance hierechy. [4+12]
4. (a) What is a package? Explain different ways of defining packages.
   (b) Explain importing of packages and the CLASSPATH environment variables.
   (c) Write a program to create two classes in a single package and access first class from the second class. [4+4+8]
5. (a) Explain differnet ways to implement multithreading in java using illustrative examples.
   (b) Write a program to create a user-defined exception. [8+8]
6. Write short notes on the following:
   (a) Events
   (b) Event sources
   (c) Event classes
   (d) Delegation event model. [4+4+4+4]
7. (a) Explain the differences between Applet class and jApplet class.
   (b) Write a swing applications to create and display a label containing both an icon and string.
   (c) Write an applet program to create a tabbed pane that contains 3 tabs named cities, colors and flavors. Cities tab contains 4 buttons, colors tab contains 3 check boxes and flavors tab contains a combo box of 3 flavors. [3+5+8]
8. (a) Write a program to demonstrate accessing a collection via an iterator.

(b) Write a program to demonstrate storing user-defined classes in collections. [8+8]

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Code No: 07A3EC06 **Set No.3**

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1. (a) Specify the ways how to coping with complexity in software developement.
   (b) Differentiate between data abstraction and data hiding. [8+8]
2. (a) Differentiate between type conversion and type casting.
   (b) What is the necessity of "finalize()" method?
   (c) Write a program to find the GCD of 4 numbers recursively. [4+4+8]
3. (a) Explain the applicability of static, final, abstract keywords to variables, methods and classes.
   (b) Write a program to demonstrate run-time polymorphism. [8+8]
4. (a) Define stream? Differentiate between byte streams and character streams.
   (b) Explain the File object, its use, and different ways of create file objects.
   (c) Write a java program to read a file line by line and account the number of lines, words, characters in it. [4+4+8]
5. (a) Explain why java has Thread class and Runnable interface even through one is sufficient to create threads.
   (b) What is the difference between multithreading and multitasking?
   (c) Write a program to demonstrate creation of multiple threads. [4+4+8]
6. (a) Write a program to demonstrate horizantal and vertical scrollbars.
   (b) Write a program to display file dialog box in open mode. [8+8]
7. (a) Write a program to create a swing applet contains a text field. If one presses "ENTER" key after typing something, it should be displayed in the status window
   (b) Write a program to create a swing applet that displays four radio buttons and a text field. When a radio button is pressed display its text (label) in the text field. [8+8]
8. (a) Explain briefly various legacy classes and interfaces in java.util package.
   (b) Explain the use and different constructors of java.util.Random class.
   (c) Write a program to generate values from 1 to 100 in random order and print the values. [6+3+7]

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Code No: 07A3EC06 **Set No.4**

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1. Write short notes on the following:
   (a) Abstraction
   (b) Inheritance
   (c) Encapsulation
   (d) Polymorphism. [4+4+4+4]
2. Differentiate between Neated classes and inner classes with suitable example programs. [16]
3. (a) Can we have classes with both abstract and final acess specifiers. Give an illustrative examples.
   (b) Explain briefly the transient and volatile acess modofiers.
   (c) Write a program to demonstrate static (compile-time) polymorphism.[4+4+8]
4. (a) Explain the four categories of visibility for class members in view of packages.
   (b) Write a program to crate a package and a class within it and acess the class inside this package from a class outside this package. [8+8]
5. (a) Differentiate between synchronized methods and synchronized statements.
   (b) Explain briefly how to suspend, resume and stop threads.
   (c) Write a program to Demonstrate interthread communication. (producer consumer problem) [4+6+6]
6. (a) Explain briefly the AWT class hierarchy.
   (b) Explain briefly different layout managers in AWT.
   (c) Write a simple program to demonstrate grid layout. [4+6+6]
7. (a) Explain various methods called sequentially bt AWT when initializing an applet and terminating an applet.
   (b) Write a simple program to demonstrate applet life-cycle. [8+8]
8. Write short notes on the following:
   (a) Client/Server
   (b) Sockets

(c) Domain Naming Service (DNS)

(d) Proxy Servers. [4+4+4+4]

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