Printed Pages : 4 TCS – 403

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 1069 Roll No. | | | | | | | | | | |

B. Tech.

(SEM. IV) EXAMINATION, 2008-09

OBJECT ORIENTED SYSTEMS

Time : 3 Hours] *[Total Marks : 100*

Note : Attempt **all** questions. All questions carry **equal** marks. In case of numerical problems assume data wherever not provided. Be precise in your answer.

1 Answer any **four** parts of following: **5×4=20**

(a) Why is JAVA known as platform neutral language? and secured than other languages?

(b) What is a thread? Discuss JAVA Thread Model

(c) What is nesting of classes? Why we use it ?

(d) How do we use templates in generic programming?

(e) How Java is strongly associated with the Internet? Commnet on this "Java is a robust langauge having all OOP features."

(f) Why is Java known as true object oriented and secured than other languages? Explain - Java is free from langauge.

2 Attempt any **four** of the following: **5×4=20**

(a) What is state diagram? Draw the nested state diagram of any suitable example.

(b) Write a note on Dynamic model.

(c) What do you mean by event trace? Explain event trace for a bug in a program.

(d) What do you understand by scenario? Write secenario for

-Writing an algorithm for a problem.

-Going for a drive.

(e) What is concurrency? How it is used in Java?

(f) What are static functions and static variables in a class? What are limitations and advantages of having such variables and classes?

3 Attempt any **four** parts of the followings: **5×4=20**

(a) Write short notes on:

(i) Object modeling techniques.

(ii) SA and SD

(b) Comment on this "JAVA facilitates doing many processes at a time". And explain with help of a program showing multiprocessing and Multi-Threading.

(c) What do you understand by operation in functional modeling and object modeling?

(d) What is a stream in Java? What is the difference between a binary and text stream? How do we handle deadlock in case of multithreading ?

(e) Prepare a data flow diagram for computing the volume and area of rectangle and circle. Input length and width of rectangle and radius of a circle.

(f) The total distance traveled by a vehicle in t seconds is given by distance= $u\ t + at^2/2$ where u is the initial velocity (meters per second) a is the acceleration (meters per second^2). Prepare a data flow diagram to evaluate the distance traveled at regular intervals of time, given the values of u and a. Flexibility is provided to the user to select his own time intervals and repeat the calculations for different values of u and a.

4 Attempt any **two** parts of the following: **10x2**

(a) What is AWT? Explain its applications and working with windows.

(b) What is polymorphism? How overriding is different from overloading?

(c) What are different kinds of inheritance? What is multiple inheritances? State purpose of an interface. Explain with example of Runnable interface.

5 Write notes on : (any **four**) **5×4=20**

(a) Java Beans

(b) Brief functioning of upper layer email.

(c) Differences between C++ and Java

(d) Dynamic Billboard Applet

(e) Java Swing

(f) Java servlet.
