Printed Pages : 3 **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, 2007-08

OBJECT ORIENTED SYSTEM

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

Notes : *(1) Attempt **all** questions.*
*(2) All questions carry **equal** marks.*
(3) In case of numerical problems assume data wherever not provided.
(4) Be precise in your answer.

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

(a) What is short circuiting? Give reasons why exception handling techniques should not be used for conventional program control.

(b) Explain the following terms with suitable examples :
(i) Links
(ii) Association

(c) How do we use templates in generic programming? Why?

(d) What is polymorphism? Explain.

(e) Explain the different kinds of inheritance.

(f) Differentiate between the generalization and specialization. Explain utility of these.

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

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

(b) Write in short about a dynamic model and its advantages and disadvantages with example.

(c) What is concurrency? How is it used?

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

(e) What do you understand by scenario? Write scenario for :

Writing a program for a problem.

Checking mails in inbox.

(f) What are advanced dynamic modeling concepts? How are they used in modeling?

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

(a) What is a stream in Java? What is the difference between a binary and text stream?

(b) Prepare a data flow diagram for an applet that receives temperature in centigrade and convert the temperature in Fahrenheit or vice versa. Take use of Buttons and Text fields for input, output and Convert.

(c) Write short notes on :

(i) Object modeling techniques

(ii) SA and SD

(d) Explain Multiprocessing and Multi-threading with the help of suitable programmes.

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

(f) Differentiate between actor and data store in a data flow diagram.

4 Attempt any **two** parts of the following : **10×2=20**

(a) How do we handle deadlock in case of multithreading?

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

(c) Give reasons why exception handling techniques should not be used for conventional program control. Discuss how exception handling is done in Java?

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

(a) IO streams

(b) Lavatron Applets

(c) Packages in Java

(d) Dynamic Billboard Applet

(e) Java Swing

(f) Java Servlet.
