Total No of Questions: [8] *SEAT NO. :*

[Total No. of Pages : 2]

S.E. 2012 (Computer)

Object Oriented and Multicore Programming

(Semester - II)

Time:2 Hours *Max. Marks : 50*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to the right side indicate full marks.***
3) ***Use of Calculator is allowed.***
4) ***Assume Suitable data if necessary***

Q1) a) Define the following terms [8]
1. Class
2. Static data member
3. Inline function
4. Member access control

b) Explain virtual destructor with example. [4]

OR

Q2) a) What is operator overloading? Write a program to overload [8]
1. Operator + for concatenation of two strings
2. Operator >> for reversing a given string
3. Operator << for displaying a given string

b) What is static member function? Give a example for the same [4]

Q3) a) Explain following [9]
1. Generic Programming
2. RTTI
3. Early binding and late binding

b) What are core operating system services? [3]

OR

Q4) a) How to handle multiple exceptions occurred in a program? [5]

b) What is POSIX_SPAWN ( ) function? How to create a child process using POSIX_SPAWN ( ) function? Explain with example [7]

Q5) a) Explain following: [8]
1. Hardware thread
2. Software thread
3. Hybrid thread
4. User level thread

b) Explain contention scope of a thread [5]

OR

Q6) a) Explain method of thread creation and joining with suitable code. [8]

b) Explain scheduling policies of a thread. [5]

Q7) a) Explain different PRAM models with respect to concurrent and exclusive memory access. [5]

b) Explain following [8]

1. POSIX semaphore
2. MUTEX semaphore

With their respective operations

OR

Q8) a) What are MUTEX attribute object functions? [5]

b) Explain thread strategy approach. [8]