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**[5152]-167**

**S.E. (Comp.) (II Sem.) EXAMINATION, 2017**

**OBJECT ORIENTED AND MULTICORE PROGRAMMING**

**(2012 PATTERN)**

**Time : Two Hours**

**Maximum Marks : 50**

- N.B. :—** (i) Answer Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4 or Q. No. 5 or Q. No. 6, Q. No. 7 or Q. No. 8.  
(ii) Neat diagrams must be drawn wherever necessary.  
(iii) Figures to the right indicate full marks.  
(iv) Assume suitable data, if necessary.

1. (a) Define the terms : [8]  
(i) Member Access Control  
(ii) RTTI  
(iii) Constructor and Destructor  
(iv) Static member function.  
(b) Explain the virtual base class with suitable example. [4]

*Or*

2. (a) Explain the following terms : [9]  
(i) Generic programming  
(ii) New and delete keyword  
(iii) Pure virtual function.  
(b) Explain the concept of copy constructor in detail. [3]

P.T.O.

3. (a) What is a scope resolution operator ? Explain with suitable example. [4]
- (b) Explain the free store operators and memory management operators. [4]
- (c) What do you mean by dynamic initialization of variables ? Explain with example. [4]

*Or*

4. (a) Explain with suitable example, call by value and call by reference. [8]
- (b) How to handle multiple exceptions occurred in a program ? [4]
5. (a) Explain difference between function overloading and function template. [6]
- (b) Explain STL in detail with its components. [6]

*Or*

6. (a) Explain try-catch-throw-rethrow in detail with example. [6]
- (b) Distinguish between error and exception [3]
- (c) Explain any *two* unformatted I/O functions. [3]
7. (a) Explain threads in terms of creating, compiling and linking. [6]

- (b) Explain concept of setting thread and scheduling and priorities. [4]
- (c) What are thread interface classes ? Give example. [4]

*Or*

8. (a) Explain with suitable diagram, decomposition of tasks in multiprocessing environment. [8]
- (b) Explain sequential and concurrency models. [3]
- (c) Explain message queue and semaphore. [3]