MCA – 33

III Semester M.C.A. Examination, Feb./March 2010
ADVANCED OPERATING SYSTEMS

Time : 3 Hours Max Marks : 100

Instructions *: 1) Answer **all** questions in Part **A**, **5** out of **8** questions in Part **B** and **4** out of **6** questions in Part **C**.*
*2) Part **A** : Questions from **1** to **8** carry **1** mark each and **9** to **14** carry **2** marks **each**.*
*3) Part **B** : **Each** question carries **8** marks.*
*4) Part **C** : **Each** question carries **10** marks*

PART – A

1. What is Inter Process Communication ?
2. Define Paging.
3. What is Protection domain ?
4. Define Authentication.
5. What is Dynamic Loading ?
6. Define Semaphores.
7. What is thrashing ?
8. Define Real Time Systems.
9. Explain cp and mv commands with examples.
10. Describe process detailed state.
11. List few scheduling algorithms.
12. How to implement Semaphores ?
13. What are the Classical Synchronization problems ?
14. What is Hold and Wait condition ?

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PART – B

1. Explain the bounded buffer problem and Readers-Writers problem.
2. Explain the four levels of security measures to protect the system.
3. Describe swapping process ?
4. What are the main goals of Protection ?
5. Explain Dining-Philosophers Problem
6. What is Resource allocation graph ?
7. Describe Circular Wait ?
8. Explain Protection Systems.

PART-C

1. Explain the combined approach to handle deadlocks.
2. What are the main functions of Memory Management ?
3. Explain Partition Memory Management.
4. What are advantages and disadvantages of fragmentation ?
5. Explain demand paging and pre paging.
6. Describe Cryptography ?

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