CMP507 Operating System - Sem3

P30/P32/CMP255/EE/20180115

Time : 3 Hours **Marks : 80**

Instructions :

1. All Questions are Compulsory.
2. Each Sub-question carry 5 marks.
3. Each Sub-question should be answered between 75 to 100 words. Write every questions answer on separate page.
4. Question paper of 80 Marks, it will be converted in to your programme structure marks.

1. Solve any **four** sub-questions.

   a) Write a short note on history of operating system. 5

   b) Explain Computer Architecture with suitable Diagram. 5

   c) Explain operating system structure. 5

   d) Write a note on booting. 5

   e) Explain Interrupt service routine with diagram. 5

2. Solve any **four** sub-questions.

   a) Explain in brief process lifecycle. 5

   b) Write note on process scheduling techniques. 5

   c) Write a note on Peterson's Algorithm. 5

   d) Explain concept of semaphore with suitable example. 5

   e) Which are the techniques for Deadlock recovery? 5

3. Solve any **four** sub-questions.

a) What is dead lock? What are the dead lock detection methods? 5

b) Write a note on Fixed Partitioned Memory Management. 5

c) Explain segmentation with suitable diagrams. 5

d) Explain importance of virtual memory management system. 5

e) Describe Classical IPC problems. 5

4. Solve any **four** sub-questions.

a) What is race condition? Give an example. 5

b) Explain mutual exclusion in IPC. 5

c) Describe how to implement a lock using semaphores. 5

d) Which are the techniques used for avoiding deadlock? 5

e) Explain the term memory swapping. 5

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