P131/CMP507/EE/20230605

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.

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

   a) Define Operating System.   5

   b) What is Time sharing operating system?   5

   c) List and explain the services of Operating System.   5

   d) What is System Call? List various system calls.   5

   e) Explain the term Virtual Machine.   5

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

   a) List the desk space allocation methods.   5

   b) Explain use of Device Driver.   5

   c) What is process? Explain the process Control Block.   5

   d) Describe the lifecycle of process.   5

   e) What is Thread? Explain Multithreading.   5

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

   a) What is Inter Process Communication?   5

   b) Explain the solution to producer - Consumer problem.   5

   c) Describe the Peterson Algorithm.   5

   d) What is Deadlock? Explain the prerequisites of Deadlock.   5

   e) List and describe the techniques for Deadlock Prevention.   5

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

    a) Explain the Memory Management and types of memory management.   5

    b) What is Variable Partitioning method?   5

    c) What is paging?   5

    d) Explain the Virtual Memory Management.   5

    e) Define Authentication. Explain the need of it.   5