

Roll No. 2182300201

Total No. of Questions : 6]

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**EX-219**

**B.Tech. V<sup>th</sup> Semester (New Scheme) CSE**

**Examination, 2022-23**

**Operating System**

**Paper - CS-503**

**Time : 3 Hours]**

**[Maximum Marks : 60**

**Note :-** Question no 1 is compulsory. Attempt (Q No.2 to Q No.6)

1. Write short Answers.

- (a) What are the operations of operating system
- (b) Define process ?

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**(1)**

**P.T.O.**



- (c) What are different methods for handling deadlock ?
  - (d) What is the basic method of segmentation ?
  - (e) What are the allocation methods of a disk space ?
2. (a) What is an operating system ? Explain different services of operating system ?
- (b) Describe the multiprogramming operating system ?

**OR**

- (a) Differentiate between time sharing and real time ?
  - (b) What are the types of computers system Architecture ?
3. (a) Draw the process state transition diagram and explain it ?
- (b) Explain the types of schedulers context switching and dispatcher ?

**OR**

- (a) Differentiate between process and threads ?
- (b) What is scheduling : Explain FCFS algorithm and round Robin scheduling ?

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(2)

4. (a) How does process synchronization work in operating system ?
- (b) What do you mean by semaphores. Explain its uses and its implementation.

**OR**

- (a) What is deadlock ? Explain deadlock avoidance in detail ?
  - (b) What is Banker algorithm give with example.
5. (a) Compare paging and segmentation with example ?
- (b) What do you mean by thrashing what are its causes and explain various methods to handle it ?

**OR**

- (a) What is virtual memory and write the role of paging and segmentation in it ?
- (b) Explain how logical memory address are translated into physical memory address in segmented memory management system with example ?

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(3)

**P.T.O.**

6. (a) Explain disk structure with diagram ?
- (b) How does the architecture of a file system work ?

**OR**

- (a) What is system protection in operating system. How does operating system achieve it using an access matrix ?
- (b) What is distributed operating system and its advantages and disadvantages ?

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