

BT-5/D06

8922

Operating Systems

Paper-CSE-307

Time : Three Hours]

[Maximum Marks : 75

Note :- Attempt FIVE questions in all.

1. Discuss following :

- (a) Fragmentation
- (b) Compaction
- (c) Relocation.

How are they related to each other ? Explain with example.

5×3=15

- 2. What is Critical Code Section ? Discuss various mechanisms for implementing Critical Code Section. 15
- 3. Differentiate between following :
 - (a) Internal and External Fragmentation 3
 - (b) Sequential and Linked Disk Allocation 4
 - (c) Time-sharing and Real-time Operating Systems 4
 - (d) Networking and Distributed Operating Systems. 4
- 4. What is Virtual Memory ? Discuss various methods for implementing it. How the principle of locality of reference comes into picture ? 15
- 5. Discuss / Explain following Problems / Algorithms :
 - (a) Banker's Algorithm 5
 - (b) Dining Philosophers 5
 - (c) General Semaphores. 5
- 6. Discuss memory management, device management and information management features of UNIX Operating System. 15

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Contd.

25/06/2020
27th sem

7. Write notes on the following :

- (a) Multithreaded O/S 5
- (b) Real Time O/S 5
- (c) Distributed O/S. 5

8. What do you understand by Inter Process Communication and Process Synchronization ? Discuss following in this context :

- (a) Interrupt Disabling / Enabling 3
- (b) Test and Set Instruction 3
- (c) Swap Instruction 3
- (d) Wait and Signal Primitives 3
- (e) Monitors. 3