

SEAT No. _____

No. of Printed Pages : 2

[105]

SARDAR PATEL UNIVERSITY
B.Sc. Examination, SEMESTER – V : December - 2020
INFORMATION TECHNOLOGY
US05CINT04: OPERATING SYSTEMS
Tuesday, 24th December, 2020

Time : 02:00pm to 04:00pm

Max.Marks:70

Q.1 Multiple choice of Question:

[10]

1. A Program in execution is known as _____.
A. Process B. Files C. Commands D. None of these
2. Which of the following is not an operating system structure?
A. Virtual Memory B. Monolithic Structure
C. Client-server D. Layered System
3. FIFO scheduling is _____.
A. Preemptive Scheduling B. Non Preemptive Scheduling
C. Deadline Scheduling D. Fair share scheduling
4. A page fault occurs _____.
A. When Page in Main-Memory B. When Page Blocked
C. When Page is not in Memory D. None of these
5. Which of the following memory allocation strategy is fastest?
A. Best-fit B. Worst-fit C. Optimal-fit D. First-fit
6. Valid-Invalid bit scheme in page table is used in _____.
A. Fragmentation B. Compaction C. Demand paging D. None of these
7. A _____ process produces information that is consumed by a consumer process.
A. Consumer B. Producer C. Computation D. None
8. Directed graph in which Deadlock can be described called _____.
A. Resource Allocation Graph B. Allocation Graph
C. Nonpreemption Graph D. None of these
9. The If statement ends with _____.
A. end B. fi C. end if D. None of these
10. For delimiter _____ option is use in cut command.
A. -d B. -c C. -f D. None

Q.2 Fill up the blank and/or True/False.

[08]

1. Patient Monitoring in hospital is an example of _____ type of OS.
2. Technique use to solve problem of external fragmentation is known as _____.
3. A _____ process produces information that is consumed by a consumer process.
4. _____ Option of ls command will sort output according to size of file.
5. File IS NOT a valid Process state. [True / False]
6. In Paging, Physical memory is divided into fixed-size blocks is called Frames. [True / False]
7. The process which cannot affect or be affected by the other processes executing in the system is known as Independent process.
[True / False]
8. < redirection operator is use for input redirection. [True / False]

[1]

(P.T.O.)

Q.3 Answer the following questions in SHORT (Any 10):

[20]

1. List out functions of operating system.
2. Explain Multi-user system in brief.
3. What are Turnaround Time and Response Time?
4. Explain Best-fit memory allocation techniques.
5. Explain Virtual memory in short.
6. Explain External Fragmentation in short.
7. Explain LINUX History in short.
8. When Race conditions arise?
9. Explain any two necessary conditions of Deadlock.
10. Explain rm command with all its attributes.
11. Explain date command along with its options.
12. Explain who command in brief.

Q.4 Answer the following questions in LONG(Any 4):

[32]

1. Explain process state and PCB in detail.
2. Explain SJF scheduling and Round-Robin scheduling algorithm in brief.
3. Explain NRU Page replacement and Clock Page replacement algorithm in brief.
4. Explain Second-chance Page replacement and Optimal Page replacement algorithm in brief.
5. What is LINUX? Explain basic features of LINUX Operating System.
6. What is Process Synchronization? What is Cooperative Process? Also explain Producer-Consumer Problem.
7. Explain if and case statement and for loop in LINUX.
8. Explain date, rmdir, who and pwd commands with example.

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[2]