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SARDAR PATEL UNIVERSITY

T.Y.B.Sc : SEMESTER – V

INFORMATION TECHNOLOGY

US05CINT04 : OPERATING SYSTEM

Date: 20/11/2013, Wednesday Time : 10:30am to 01:30pm Max.Marks:70

Q.1 Multiple choice of Question: 10

- [1] Patient Monitoring in hospital is an example of which type of OS?
(a) Multi User (b) Real Time
(c) Time Sharing (d) None
- [2] _____ is NOT a valid Process state.
(a) Ready (b) File
(c) Running (d) Terminate
- [3] PCB = _____
(a) Program Control Block (b) Process Control Block
(c) Process Communication Block (d) None of the above
- [4] _____ is not a valid Memory allocation algorithm.
(a) Suit-fit (b) Worse-fit
(c) Next-fit (d) First-fit
- [5] A Lazy Swapper is also known as _____.
(a) Pager (b) Frames
(c) Pages (d) None of these
- [6] Solution to internal fragmentation is _____.
(a) Process (b) Register
(c) Operating system (d) None of these
- [7] _____ is the solution of the bounded buffer.
(a) Shared-Memory (b) Data consistency
(c) Virtual memory (d) none
- [8] _____ buffer has fixed buffer size.
(a) Bounded (b) Unbounded
(c) Shared (d) None
- [9] _____ Option of ls command will sort output according to size of file.
(a) -c (b) -b
(c) -S (d) None
- [10] _____ redirection operator is use for input redirection.
(a) >> (b) >
(c) < (d) None

Q.2 Attempt any 10 questions:

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- [1] Define Operating system.
- [2] List advantages of multi-user OS.
- [3] Explain any two process scheduling criteria in brief.
- [4] Explain Virtual memory in short.
- [5] Explain Internal Fragmentation in short.
- [6] Explain Worst-fit memory allocation techniques.
- [7] Explain algorithm-1 for two-process solution.
- [8] What is Cooperative process?
- [9] Explain resource utilization in details.
- [10] Explain use of mkdir and rmdir command.
- [11] Explain Test command in short.
- [12] Explain use of ~~mkdir and rmdir~~ command.

Explain the cut command in short

Conti...

- Q.3 [A] Explain monolithic structure of OS. 5
[B] Explain the functions, which are performed by Operating System? 5
- OR
- Q.3 [A] Explain Virtual machine in brief. 5
[B] Describe FCFS scheduling with advantages and disadvantages. 5
- Q.4 [A] What is Demand Paging? Explain in brief. 5
[B] Explain Optimal Page replacement algorithm in detail. 5
- OR
- Q.4 [A] Explain Paging techniques with advantages and disadvantages. 5
[B] Explain Second-chance Page replacement algorithm with example. 5
- Q.5 [A] Explain algorithm-3 for solving critical section problem for two-process. 5
[B] What is Process Synchronization? Explain. 5
- OR
- Q.5 [A] What are the necessary conditions for Deadlock prevention? 5
[B] Explain algorithm for Multi-process solutions. 5
- Q.6 [A] Explain all control structures in details 5
[B] Explain sort and paste commands with example. 5
- OR
- Q.6 [A] List various modes of vi editor. Explain commands of exit mode of vi editor. 5
[B] Explain grep command with at least four possible attributes and examples. 5