SEAT No._____

[55]

SARDAR PATEL UNIVERSITY
P.G.D.C.A.A. Semester – I (NC)
External Examination – April 2018
[PS01FDCT01]: Operating System

Friday - 20th April' 2018   Time: 2.00pm to 5.00pm   **Max. Marks: 70**

NOTE: [1] Figure indicated right is maximum marks for each question
[2] Show calculation where and when needed

Q: 1   Select the appropriate option from the following   **[08]**

[1] The storage capacity of a floppy disk is typically only _____.
   [a] 1.44MB   **[b]** 100MB   **[c]** 10MB   **[d]** 5MB

[2] Using non-preemptive FCFS scheduling, what is the Average waiting time for following?

Process	A	B	C	D
Burst Time	10	6	2	4

   [a] 11   **[b]** 8.5   **[c]** 10   **[d]** 7

[3] Layered architecture os operating system having _____ layers
   [a] Six   **[b]** Five   **[c]** Four   **[d]** Seven

[4] Which of the following page replacement algorithms suffers from Belady's Anomaly ?
   [a] FIFO   **[b]** LRU   **[c]** Optimal   **[d]** None of the above

[5] Satellites launching in orbit is an example of _____ Operating System.
   [a] Multiuser   **[b]** Real Time   **[c]** Timesharing   **[d]** None of these

[6] _____ command is used to copy files.
   [a] fork()   **[b]** kill()   **[c]** cp   **[d]** cd

[7] PCB stands for_____.
   [a] Program Control Block   **[b]** Process Control Block
   [c] Process Counter Block   **[d]** Program Counter Block

[8] The technique used to solved problem of external fragmentation is known as _____
   [a] Process   **[b]** Compaction   **[c]** Command   **[d]** Paging

Q: 2 Answer the following questions in brief [Attempt any seven]   **[14]**

[1] **Define:** Operating System. Give any two examples.

[2] List types of Operating System and explain any one of them in brief

[3] **Explain terms: [1]** Program **[2]** Process

[4] List types of schedulers and explain <u>any one</u> of them in brief

[5] What is client server architecture?

[6] Explain first fit and best fit strategies for selection of partition.

[P.T.O]

[7] Explain deadlock. List necessary conditions to characterize deadlock

[8] What is Fragmentation?

[9] Briefly explain various mode of vi editor

Q: 3 **[A]** Discuss functions of operating system [06]
[B] Draw and explain Process state life cycle in detail. [06]

OR

[B] What is virtual memory, explain its advantages and disadvantages [06]

Q: 4 **[A]** Explain process creation and process termination operation on Process [06]
[B] Write a note on FCFS and SJF scheduling algorithm with appropriate example. [06]

OR

[B] Write a note on Priority and Round Robin scheduling algorithm with appropriate example. [06]

Q: 5 **[A]** Explain Contiguous Memory Allocation in detail [06]
[B] List page replacement algorithms, explain any one in detail with example [06]

OR

[B] Write a note on Demand Paging. [06]

Q: 6 **[A]** What is Unix? Write History of Unix [06]
[B] Discuss features of unix in detail. [06]

OR

[B] Explain ls, man, and who commands of unix in brief [06]

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