Code No: 154BR **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, November/December - 2020
OPERATING SYSTEMS
(Common to CSE, IT)

Time: 2 hours **Max. Marks: 75**

Answer any Five Questions
All Questions Carry Equal Marks
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1. List out the types of operating system and explain batch OS and time sharing OS in brief. [15]

2. Explain about the system calls fork, exit, wait, waitpid and exec. [15]

3. What is Semaphore? Give the implementation of Bounded Buffer Producer Consumer Problem using Semaphore. [15]

4. Explain the swapping in memory management. [15]

5.a) Explain about the implementation of Access Matrix.
b) Explain about lseek( ) and stat( ) system calls. [7+8]

6.a) Explain about the distributed operating system in brief.
b) Explain the various system calls are used in OS. [7+8]

7. Consider the following set of processes, with the length of the CPU burst given in milliseconds:

Process	Burst Time	Priority
P1	27	5
P2	12	1
P3	37	2
P4	19	4
P5	10	3

The processes are assumed to have arrived in the order P1, P2, P3, P4, P5 all at time 0. Draw the Gantt charts that illustrate the execution of these processes using the following scheduling algorithms: FCFS, SJF and Priority. Also determine the average waiting time and average turnaround time for each of the algorithms. [15]

8.a) Explain contiguous and linked file allocation methods.
b) Explain about domain protection mechanism in brief. [8+7]

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JNTUH USED 21-11-2020 PM