



LJ-1255

BCA (Part-III)

Term End Examination, 2021

Paper - V

Computer Operating System

Time : Three Hours] [*Maximum Marks* : 100

Note : Answer any **two** parts from each question. All questions carry equal marks.

Unit-I

1. (a) Write the features of Operating System.
- (b) Explain time sharing system with example.
- (c) Write short notes on the following :
 - (i) Real time system
 - (ii) Supervisor Service Control

(2)

Unit-II

2. (a) Consider the following set of processes, assumed to have arrived at time 0, in the order p_1, p_2, \dots, p_5 , with the length of the CPU-burst time given in milliseconds.

Process	Burst time	Priority
p_1	10	3
p_2	1	1
p_3	2	3
p_4	1	4
p_5	5	2

Using priority scheduling, draw a gantt chart and find the average waiting time of all processes.

- (b) Describe the process control block.
(c) Explain round robin scheduling with suitable example.

Unit-III

3. (a) Define the swapping. Explain multiple-partition allocation.
(b) Explain optimal page replacement algorithm with example.
(c) Write short notes on the following :
(i) Fragmentation
(ii) Drum Scheduling

(3)

Unit-IV

4. (a) Explain linked allocation performance.
(b) Explain general model of File system.
(c) What are basic file system and physical file system ? Explain.

Unit-V

5. (a) Describe dead lock prevention.
(b) How to detect dead lock problem ?
Explain any one detection algorithm with example.
(c) Describe dead lock avoidance bankers algorithm.
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