U.G. 3rd Semester Examination 2021

Computer Application (B.C.A)

(Honours

Paper Code : DC 6(a)

Operating System

[CBCS]

Full Marks: 25 **Time: 2 Hours**

The figures in the margin indicate full marks.

Group -A (2 x 5=10)

Answer any five questions.

1. (a) What is system call?
   (b) What is Pre-emptive Scheduling?
   (c) What is message passing IPC?
   (d) What is linked file allocation method?
   (e) What is Binary semaphore?
   (f) Distinguish between a CPU bound process and I/O bound process.
   (g) What is Belady's anomaly?

Group -B (5 x 3=15)

Answer any three questions.

2. Explain the LRU page replacement algorithm with an example. 5
3. What is thread? What are the advantages of multi-threading programming? (1+4)=5
4. Consider the following set of processes:

Process	Burst Time	Priority
P_1	7	2
P_2	5	1
P_3	3	3
P_4	1	4

a) Draw the Gantt chart illustrating the execution of these processes using Priority scheduling. Assumes low value denotes high priority.

b) Calculate the average waiting time. (3+2)=5

5. Write a short note (any one): 5

(a) Dinning Philosophers problem (b) Segmentation with paging