B. SC(Programme) THIRD SEMESTER EXAMINATION 2021

Subject: Computer Science (Programme)   Course Id: 31518

Course Title: Operating system

Full Marks: 25   Time: 1 Hr. 15 min

The figure in the margin indicate full marks

Answer all the question.

1. Answer any five question: -   **5x1=5**

a) What is virtual memory?

b) What do you mean by context switching?

c) What is scheduler?

d) When does trashing occur?

e) What do you mean by binary semaphore?

f) Write down the difference between logical and physical address space.

g) What is the basic function of paging?

h) What is kernel of OS?

2. Answer any two questions: -   **2x5=10**

a) Write a short note on PCB.   5

b) What is fragmentation? Explain the different types of fragmentation?   2+3=5

c) What is operating system? Explain the different functions of operating system   1+4

d) Explain the difference between multilevel queue and multilevel feedback queues   5

3. Answer any one question: -   **1x10=10**

a) What is deadlock? Explain four conditions which are necessary to occur a Deadlock. What is

    starvation?   2+6+2=10

b) Consider the set of 5 processes whose arrival time and burst time are given below-

Process Id	Arrival time	Burst time
P1	3	1
P2	1	4
P3	4	2
P4	0	6
P5	2	3

CPU scheduling policy is Shortest Job First (SJF).Draw Gantt chart for the scheduling. Also calculate the average waiting time and average turnaround time.   6+2+2