B.Sc. DEGREE (CBCS) EXAMINATION, NOVEMBER 2018

Third Semester

B.Sc Physics Model II Computer Applications

VOCATIONAL COURSE - CA3VOT06 - OPERATING SYSTEM

2017 Admission Onwards

FA62015D

Maximum Marks: 60

Time: 3 Hours

Part A

Answer any **ten** questions.

Each question carries **1** mark.

1. What is an operating system?

2. Distinguish between hard real time systems and soft real time systems.

3. What is Process ?

4. What is a process control block?

5. What is CPU burst?

6. What is dispatcher

7. What is starvation?

8. Define SRTF Strategy?

9. What are the different memory allocation strategies?

10. Differentiate between Next fit and Worst fit algorithms.

11. What virtual memory?

12. Explain resource allocation graph?

(10×1=10)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Briefly explain different views of Operating System?

14. Write short note on Batch Operating System

15. Distinguish between long term , short tem and medium term scheduler?

16. Explain the role played by the priority in a process scheduling?

17. What is priority scheduling? Explain pre-emptive and non pre-emptive versions of the same.

18. Consider three processes P1, P2, and P3 with same arrival time at t=0 . Their response time is shown in the following table. Assuming that the time slice is 4 ms. How will these processes be scheduled according to Round robin scheduling ? Compute average waiting time and average turnaround time.

19. Write a short note on dynamic address space binding

20. Differentiate between internal and external fragmentations.

21. What are file attributes?

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Describe the various Operating system services

23. Explain the different types of Scheduling Algorithms

24. Consider the following set of six processes, with arrival time and burst time as given below Draw Gantt charts illustrating the execution of these processes using FCFS, STRF (preemptive SJF), Preemptive priority (a smaller priority number implies a higher priority) and Round Robin (Time slice/time quantum=2) scheduling. Find the average TAT and average waiting time for each algorithm?

25. Explain the Deadlock conditions and Resource allocation Graph. How can the deadlock be prevented?

(2×10=20)