

**Question Bank (G scheme)**

**Name of subject: Operating System**

**Unit Test: II**

**Subject Code: 17512**

**Courses: IF5G**

**Semester: V**

**CHAPTER 3- Process Management**

**[22 marks]**

**3marks:**

1. Draw and explain process control block in detail.
2. Define the term Asynchronous and synchronous communication.
3. What is context switching?

**4marks:**

4. Draw process state diagram and state its meaning
5. Describe inter process communication?
6. Explain creation and termination operation on process.
7. Describe inter process communication.
8. Explain multilevel queue scheduler with suitable example.
9. Draw types of schedulers. State and explain any one scheduler used in scheduling.
10. What is thread? Explain many to many threading model with sample diagram?

**CHAPTER 4 – Scheduling**

**[20 marks]**

**3marks:**

11. What is deadlock? State methods/techniques to handle the deadlock?
12. Describe CPU & I/O burst cycle.
13. Difference between pre-emptive and non-pre-emptive scheduling.

**4marks:**

14. Explain different process scheduling criteria.
15. Describe the FCFS algorithm and priority algorithm. Explain with example.
16. Describe the round robin algorithm with suitable example.
17. Describe the shortest job first scheduling method. Illustrate with examples.
18. Enlist and describe in detail deadlock prevention method.
19. Solve the problem by using FCFS and Round Robin scheduling algorithm. Find average waiting time for each algorithm:

<b>Process</b>	<b>Burst Time</b>
P1	10
P2	3
P3	7
P4	5

Use time quantum = 4ms for round robin algorithm.

### **CHAPTER 5 – File System and Memory Management [20 marks]**

#### **3marks:**

20. List and state in one sentence 8 different types of file
21. Explain any 4 operation which can be performed on file and explain any 4 attributes of file.

#### **4marks:**

22. Explain following memory allocation methods:
  - A. Contiguous
  - B. Linked
  - C. Indexed
23. Explain FIFO page replacement algorithm for the reference string 7 0 1 2 0 3 0 4 2 3 1 0 3. List drawbacks
24. What is portioning? With diagram explain variable memory portioning technique. Also state its advantage?
25. Difference between sequential and direct file access method.
26. List two methods of free space management technique & explain any one

### **CHAPTER6 – Unix Case Study [8 marks]**

#### **4marks:**

27. What are major features of UNIX?
28. Write a note on components of UNIX.
29. Differentiate between Linux and UNIX.