

SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar
B. B. A. (Honours) Information Technology Management Program
Semester – III
UM03EBBI07 Methods and Practices of Operating System
(w.e.f June 2016)

Total Credits: 3
Total Marks: 100

THEORY: 3 Hrs per week

Unit - 1 Introduction of OS 25%
Introduction to Operating System, Functions of OS, Different types of Operating Systems: Real Time, Multi-User, Time Sharing, OS Structure – Monolithic, Layered, Virtual Machine, Client-Server

Unit - 2 Scheduling 25%
CPU Scheduling: Introduction to Process, Process Control Block, Process Scheduling, FCFS Scheduling, SJF Scheduling, Priority Scheduling, Round Robin Scheduling

Unit - 3 Memory Management 25%
Memory Management: Concept, Memory Management Techniques, Swapping, Virtual Memory System, Demand Paging, FIFO Page Replacement Algorithm

Unit - 4 Process Synchronization and Deadlocks 25%
Introduction to Cooperating process, Process Synchronization, Critical Section Problem, Deadlock and characterization, Resource Allocation Graph

Evaluation: Internal: 40 Marks
External: 60 Marks (Two – Hours Examination)

References Books:

1. **Andrew S. Tanenbaum**, "Operating System design & Implementation", PHI
2. **James Peterson and Abraham Silberschatz**, Operating System Concept, Addison Wesley
3. **D. M. Dhamdhere**, "Operating Systems: A Concept-based Approach", TMH Education, 2E.