SEMESTER-II

COURSE CODE :- C 4
COURSE TITLE :- OPERATING SYSTEM
CREDIT :- 4

Marks distribution

Full Marks: 15 (MSE) + 60 (ESE) = 75 Duration: 3 hrs Pass Marks: 34

This paper consists of 50 marks and divided into two groups:

Group-A: Objective questions (Compulsory)	:	1 x 10 = 10
Group-B: descriptive questions (5 out of 8 questions)	:	10 x 5 = 50

Total =		60

The questions must cover the entire syllabus with equal distribution of marks as far as practicable.

Module 1: Concept of Operating System: Simple batch systems, multiprogrammed batch systems, time-sharing systems, parallel systems, distributed systems, real-time systems.

Module 2: Computer System structure: Computer System Operation, I/O structures storage structure, storage hierarchy and hardware protection.

Module 3: Operating System structure: System components, system services, system calls, system programs, and system structure- simple structure.
Process concept: process state, process control blocks, process scheduling and schedulers

Module 4: CPU scheduling: CPU-I/O burst cycle, scheduling criteria, scheduling algorithms (Non pre-emptive-FCFS, SJFS, Pre-emptive-SJFS, and RR).

Module 5: Memory management: contiguous allocation, Paging, Swapping, And Segmentation. Virtual memory- Demand paging, page replacement, page replacement algorithms (FIFO, LRU).

Module 6: File system structures- file allocation (contiguous, linked, and indexed), free space management (bit vector, linked list, grouping, counting).

Module 7: Disk structure- Disk scheduling (FCFS, SSTF, SCAN)
Module 8: Security- The problem, authentication, and program- threats, encryption.

Books Recommended:

Operating System: Peter Gelvin
God boleDhamdhare

PRACTICAL: MS.DOS

Basic of DOS commands, Internal Commands, External Commands and Batch Creation etc