

Note: All questions are compulsory.
Draw neat diagram wherever needed.
Figures to right indicate full marks.

Q.1 Attempt any two.

(10)

- Define Operating system and Explain Structure of Computer System.
- Explain multiprocessing Operating System with advantages and disadvantages.
- Difference between compiler and interpreter.
- Write Short note on Assembler.

Q.2 Attempt any two.

(10)

- What are the different operating system services?
- Explain layered structure of operating system.
- Explain System boot process.
- What is system call? Explain with example?

Q.3 Attempt any two.

(10)

- Calculate average waiting time according to Priority base algorithm.

Process	Burst Time	Priority
P1	5	3
P2	2	1
P3	8	4
P4	4	2

- Explain Process scheduling Queue model.
- What are the benefits of multithreading?
- Explain different types of scheduler.

Q.4 Attempt any two.

(10)

- Explain Concept of Demand paging.
- Write a short note on swapping.
- Calculate page fault for following reference string using LRU page replacement algorithm.

7 0 1 2 0 3 0 4 2 3 0 3 2 1 2 0 1 7 0 1

- Write a short note on logical v/s physical address space.

(10)

Q.5 Attempt any two.

- a) Explain file concept with its attributes.
- b) Explain deadlock with its four necessary conditions.
- c) Explain file operations.
- d) Explain concept of Mounting.

(10)

Q.6 Attempt any two.

- a) Explain Typical Bus Structure.
- b) Explain Domain structure.
- c) Explain Different types of virus.
- d) Write short note on worm.

Q.7 Attempt any three.

(15)

- a) Explain Clustered Operating System with advantages and disadvantages.
- b) Explain System programs with its different categories.
- c) Explain concept of threads and thread models.
- d) Explain concept of virtual memory.
- e) Explain Resource allocation graph.
- f) Explain different types of Program threats.