- a) What is SPOOLING?
- b) What is Resource Allocation Graph?
- c) What is Process Control Block?
- d) What are System Calls?
- e) Define Compaction?
- f) Why is protection of file required?
- g) When the system is in safe state?
- h) Name any four Multi user operating systems?
- i) Define Trojan horse and virus?
- j) Why pages are sizes always powers of 2?

## Section - B

$$(4 \times 5 = 20)$$

- Q2) Explain various strategies to deal with deadlocks? How deadlock is detected and recovered.
- Q3) What is fragmentation? Explain the difference between external and internal fragmentation?
- Q4) Compare various memory management techniques.
- Q5) Explain the architecture of LINUX Operating System.
- Q6) Discuss various methods of file allocation with advantages and disadvantages?

## Section - C

$$(2 \times 10 = 20)$$

- Q7) What do you mean by scheduling? Explain with example the Shortest Job First (SJF) scheduling and Round robin scheduling algorithm?
- Q8) Explain Segmentation with help of an example.
- Q9) Explain the difference between Distributed and Multiprocessor operating systems.