

[Time:2.30 Hrs]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All question are compulsory.
 2. Figures to the right indicate full marks.
 3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.

- Q.1 Attempt **any three** of the following: 15
- a. Explain the process of Booting in computer.
 - b. What do you mean by system call? Write system calls for directory management.
 - c. What is real time operating system?
 - d. Write a short note on round robin scheduling.
 - e. Describe about monolithic system
 - f. Explain the process states
- Q.2 Attempt **any three** of the following: 15
- a. What is Memory Management?
 - b. Explain the address mapping & translation.
 - c. Discuss the concept of virtual memory.
 - d. Consider a reference string: 5, 1, 3, 1, 2, 6, 1, 2, 7, 3. the number of frames in the memory is 3. Find out the number of page faults w.r.t to FIFO page replacement algorithm.
 - e. What is segmentation?
 - f. What is demand paging?
- Q.3 Attempt **any three** of the following: 15
- a. Explain Interrupt driven I/O.
 - b. Explain Direct Memory address access?
 - c. Describe the concept of Thin client?
 - d. What is meant by RAID?
 - e. Explain Deadlock Avoidance in detail.
 - f. Explain deadlock prevention techniques in Details.
- Q.4 Attempt **any three** of the following: 15
- a. What is I/O Virtualization?
 - b. Explain types of Hypervisor with neat diagrams
 - c. Explain memory virtualization.
 - d. Differentiate between Multiprocessor, Multicomputer and Distributed Systems.
 - e. With neat diagram explain various interconnection technologies used in multicomputer.
 - f. Explain memory management in Linux

Q.5 Attempt **any three** of the following: 15

- a. Explain the architecture of Android OS with neat diagram.
- b. Write short note on memory management in windows
- c. Write a short note on process management in android
- d. Write a short note on security in windows.
- e. Explain the benefits of power management in windows.
- f. Describe the architecture of NTFS volume of windows