

University of Sargodha

M. Sc. I. T. 3rd Term Exam 2014.

Subject: Information Technology

Paper: Operating System (CMP: 620)

Time Allowed: 2:30 Hour

Session: 2012-14

Maximum Marks: 80

Note: Objective part is compulsory. Attempt any four questions from subjective part.

Objective Part

- Q.1. Write short answers of the following in 2-3 lines each on your answer sheet. (2*16)
- What is system call to create child process?
 - Process Control Block
 - Thread Control Block
 - Define demand paging.
 - Virtual machine
 - Define file system
 - Kernel
 - List four conditions for deadlock.
 - What is semaphore? What is its use?
 - What are the various types of fragmentation?
 - Define Starvation
 - Mutual exclusion
 - Multi-threading
 - Context Switching
 - Time Sharing Systems
 - Explain the terms: Waiting time, Turnaround time.

Subjective Part

- Q.2. (a) List and discuss various services provided by the operating system. (8)
(b) Compare batch operating systems and time sharing operating systems. (4)
- Q.3. Explain segmentation and paging. Compare both with advantages and disadvantages. (12)
- Q.4. Explain the virtual memory. Write the advantages and disadvantages. (12)
- Q.5. What is Banker's Algorithm of Deadlock Avoidance? Explain. (12)
- Q.6. Discuss the critical section problem. Solve the dining philosopher's problem. (12)
- Q.7. Discuss the file allocation methods. (12)