

University of SargodhaBS 5th Term Examination 2018Subject: I.TPaper: Operating System (CMP: 3621)

Time Allowed: 2:30 Hour

Maximum Mark

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

Objective Part (Compulsory)

- Q.1. Write short answers of the following in 2-3 lines each. (2*12)
- Describe the objective of multiprogramming.
 - What are types of threads?
 - What is multitasking?
 - What are various scheduling queues?
 - What is interrupt?
 - Write down the name of primary thread libraries.
 - Differences between logical and physical addresses?
 - What are necessary conditions which can lead to a deadlock situation in a system?
 - What are the states of a process?
 - What is thrashing?
 - What is Process Synchronization?
 - What is difference between preemptive and non-preemptive scheduling?

Subjective Part (12*3)

- Q.2. Explain different Operating System Services.
- Q.3. (a) What are the differences between paging and segmentation?
(b) What is fragmentation? Different types of fragmentation?
- Q.4. Explain Multilevel Queue and Multilevel Feedback Queue with example.
- Q.5. Consider the following page reference string: 6, 7, 0, 2, 1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6. How many page faults would occur for the following replacement algorithms, assuming three, four and six frames? Remember that all frames are initially empty, so your first unique pages will cost one fault each.
- LRU replacement
 - FIFO replacement
 - Optimal replacement
- Q.6. Write about deadlock conditions and banker's algorithm in details.