University of Sargodha

BS 4th Term Examination 2014.

Subject: Computer Science   Paper: Operating System (CMP-320)

Time Allowed: 2:30 Hours   Session: 2012-16   Maximum Marks: 60

Objective Part Compulsory

Q. No. 1:- Attempt all hort questions each requiring answer in 2 - 3 lines only having 2 marks each.   [24 Marks]

1. What is the context switching ?
2. What is a batch system?
3. What is a software interrupt?
4. What is the "degree of multiprogramming"
5. What is cascading termination?
6. What is round robin scheduling?
7. What is race condition?
8. What is deadlock?
9. What is circular wait condition in deadlock?
10. What is dynamic linking?
11. What is compaction? Why use it?
12. What is meant by demand paging?

Subjective Part

Note: Attempt any three questions. [12 x 3 =36]

Q.No.2:-a) Define Interrupt and also explain common functions of interrupts.
   b) What is Inter Process Communication. Explain its different communication strategies.

Q.No.3:-a) What are two differences between user level threads and kernel level threads? Under what circumstances is one type better than the other?
   b) Describe three general methods for passing parameters to the operating system.

Q.No.4:-a) Describe the differences among short-term, medium-term, and long-term scheduling.
   b) Explain the Binding of Instructions and Data to Memory

Q.No. 5 Find the average waiting time for the following set of process using the SJF, and RR (quantum = 10 milliseconds) scheduling algorithms

Process	Burst Time
P_1	10
P_2	29
P_3	3
P_4	7
P_5	12

Q.No 6- Given memory partitions of 100K, 600K, 200K, 300K, and 500K (in order), how would each of the First-fit, Best-fit, and Worst-fit algorithms place processes of 409K, 236K, 125K, and 514K (in order)? Also define First-fit, Best-fit, and Worst-fit algorithms.