Name: _____

Student No: _____

ELEC 377 Operating Systems
T.R. Dean
October 19, 2013

Quiz #2

Time: 25 Minutes

Instructions: Total 15 marks. Closed Book.
Answer all questions in the space provided on this sheet

1. (4 marks) Give a brief (one or two line) description of each of the following terms as it relates to operating systems and the material covered in class.

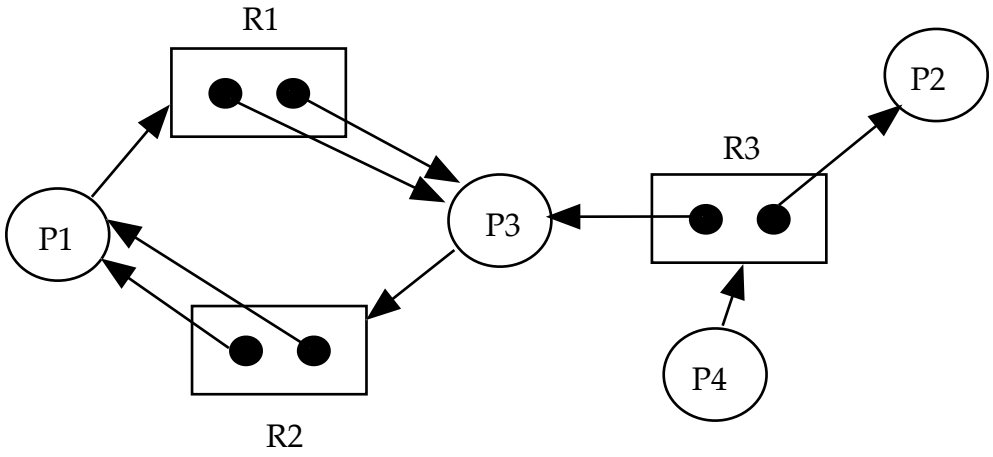
a. TLB

b. Memory Page

c. Monitor

d. Convoy Effect

2. **(2 marks)** Consider the following resource-allocation graph.



a. Which processes are currently ready to execute (i.e. in the running state or the ready state)?

b. Is there deadlock in the graph? If so, which processes are deadlocked?

3. **(2 marks)** What are two of the four criteria for deadlock? Provide an brief description of each of the two criteria you identified.

4 (5 marks) The burst time in milliseconds for 4 processes are listed below.

P1–10ms, P2–29ms, P3–3ms, P4–7 ms.

What are the total and average wait times if the SJF scheduling algorithm is used? Show the order in which the processes are executed as part of your answer. Assume no context switching overhead.

5. (2 marks) What is the difference between internal and external fragmentation.