GSI018 – SISTEMAS OPERACIONAIS

Operating Systems – William Stallings – 7th Edition
Chapter 10 – Multiprocessor and Real-Time Scheduling

Nome Completo (Discente #1) – Nro. Matrícula – eMail Institucional
Nome Completo (Discente #2) – Nro. Matrícula – eMail Institucional

REVIEW QUESTIONS

10.1 List and briefly define five different categories of synchronization granularity.

10.2 List and briefly define four techniques for thread scheduling.

10.4 What is the difference between hard and soft real-time tasks?

10.5 What is the difference between periodic and aperiodic real-time tasks?

PROBLEMS

10.1 Consider a set of three periodic tasks with the execution profiles of Table 10.6. Develop scheduling diagrams similar to those of Figure 10.5 for this set of tasks.

Table 10.6 Execution Profile for Problem 10.1

Process	Arrival Time	Execution Time	Ending Deadline
A(1)	0	10	20
A(2)	20	10	40
•	•	•	•
•	•	•	•
•	•	•	•
B(1)	0	10	50
B(2)	50	10	100
•	•	•	•
•	•	•	•
•	•	•	•
C(1)	0	15	50
C(2)	50	15	100
•	•	•	•
•	•	•	•
•	•	•	•

10.2 Consider a set of five aperiodic tasks with the execution profiles of Table 10.7. Develop scheduling diagrams similar to those of Figure 10.6 for this set of tasks.

Table 10.7 Execution Profile for Problem 10.2

Process	Arrival Time	Execution Time	Starting Deadline
A	10	20	100
B	20	20	30
C	40	20	60
D	50	20	80
E	60	20	70