

CS 314 Operating Systems, Spring 2024

Quiz #11 on April 18, 2024

List of the Possible Questions

- #1: What are “real-time systems”?
- #2: What is “hard real-time” system? What is “soft real-time system”?
- #3: What is “determinism”?
- #4: What is “responsiveness”?
- #5: What make “determinism” hard to guarantee (mention two)?
- #6: What make “responsiveness” hard to guarantee (mention two)?
- #7: In many real-time process scheduling algorithms, determinism and responsiveness are in a trade-off relationship. Describe how they are in a trade-off relationship.
- #8: What is “static real-time scheduling”?
- #9: What is “dynamic real-time scheduling”?
- #10: What is “process migration” (how is it different from “process cloning”)? Make sure to describe its primary purpose.
- #11: What is “process cloning” (how is it different from “process migration”)? Make sure to describe its primary purpose.
- #12: What are the primary advantages and disadvantages in “process cloning” (compared with “process migration”)?
- #13: What are the primary advantages and disadvantages in “process migration” (compared with “process cloning”)?
- #14: What are the three essential decision-making factors for code migration and cloning?
- #15: Mention three different actual metrics popularly used for “Transfer Policy”?
- #16: Mention four different actual metrics popularly used for “Location Policy”?
- #17: What is “process migration delay”?
- #18: What does “migrated execution time” consist of (mention three components)?

#19: Which of followings can “process migration” migrate?

- (a) Program codes
- (b) Program data
- (c) Local resources

#20: Which of followings can “process cloning” migrate?

- (a) Program codes
- (b) Program data
- (c) Local resources

#21: What are “push-model migration/cloning” and “pull-model migration/cloning”?

#22: What are the primary advantages in “pull-model migration/cloning” (compared with “push-model”)?

#23: What is “weak mobility” (make sure to mention the two key differences from “strong mobility”)?

#24: What is “strong mobility” (make sure to mention the two key differences from “weak mobility”)?

#25: What is the primary advantage and disadvantage in “strong mobility” (compared with “weak mobility”)?

#26: What is “internal execution”?

#27: What is “internal execution”?

#28: What is the primary advantage in “external execution” (compared with “internal execution”)?