Quiz 7 Disk Storage and File Organization

Due Oct 25 at 10:30am **Points** 100 **Questions** 9
Available Oct 25 at 10am - Oct 25 at 10:30am 30 minutes **Time Limit** 30 Minutes

Instructions

This quiz contains True/False and Multiple Choice Questions. It will run for 30 minutes.

Having an issue with the quiz? Please send an email to the course staff (rkheni@wpi.edu) (mailto:cvieira@wpi.edu) with "CS542 Quiz" included in the subject line any time during the quiz.

This quiz was locked Oct 25 at 10:30am.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	28 minutes	63 out of 100

Score for this quiz: **63** out of 100
Submitted Oct 25 at 10:28am
This attempt took 28 minutes.

Question 1 — 0 / 10 pts

For disks, the terms “cylinder” and “track” and synonyms and refer to the same thing.

ou Answered — (•) True

rrect Answer — ( ) False

Question 2 — 10 / 10 pts

Sequential access in hard drive is much faster than random access.

Correct!

- (•) True
- ( ) False

Question 3

10 / 10 pts

A table whose columns are of all of date and numeric data types consists of fixed-length records.

Correct!

- (•) True
- ( ) False

Question 4

10 / 10 pts

A record with *n* variable-length fields will have *n* offset fields in the record header.

- ( ) True

Correct!

- (•) False

Question 5

10 / 10 pts

A disk whose rotation speed is 6,000 RPM has a maximum rotation latency of how many msec (choose the closest answer to the correct value)?

- ( ) 0.1

6

Correct! 10

5.2

Question 6

11 / 11 pts

Assume a database table with the following fields:

ID (4 bytes), Name (25 bytes), Department (15 bytes), Major (15 bytes). Each record on disk has a header part of size 8 bytes.

What will be the record size if each field has to start at 8-byte boundaries?

67

72

Correct! 80

64

Question 7

0 / 12 pts

If one disk track can hold up to 200 blocks, and the disk has 3 platters, then one cylinder can hold up to how many disk blocks?

ou Answered 600

200

900

rrect Answer 1200

Question 8

12 / 12 pts

For a fixed-length record whose fields are (int (4bytes), char(25 bytes), date (10 bytes), char(1 bytes), double (16 bytes), the record length under 8-byte alignment is what?

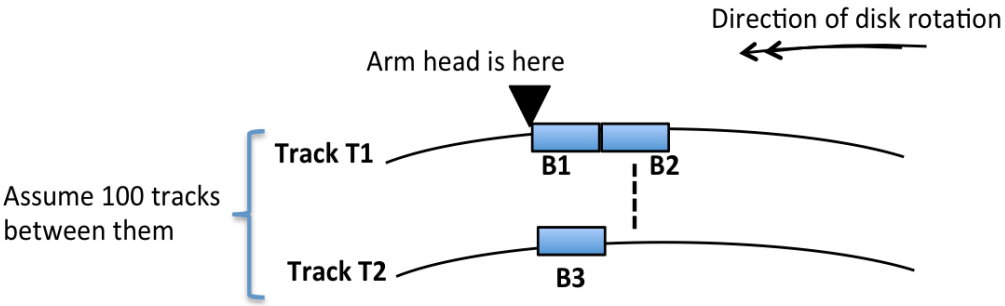
- 64
- 56
- 100
- Correct! 80

Question 9

0 / 15 pts

The block layout of B1, B2, and B3 on tracks T1 and T2 is shown below. Track T1 and T2 on the same side of one platter separated by 100 tracks, and the arm head is currently located in front of block B1.

How long will it take to read the three blocks (choose the closest answer to the correct one)?



orrect Answer

1 warm-up time + 100 * one-track seek time + one full rotation time + 3 * transfer time

99 warm-up time + 100 * one-track seek time + half of one-full rotation time + 3 * transfer time

1 warm-up time + 100 * one-track seek time + 2 * transfer time

ou Answered

1 warm-up time + 100 * one-track seek time + one full rotation time + 2 * transfer time

Quiz Score: **63** out of 100