

CSPB 3753 - Fall 2024 - Knox - Operating Systems

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Started on Saturday, 12 October 2024, 9:43 PM

State Finished

Completed on Saturday, 12 October 2024, 9:45 PM

Time taken 1 min 35 secs

Grade 10 out of 10 (100%)

Question **1**

Correct

Mark 1 out of 1

A virtual file system...

Select one or more:

- ☒ a. translates various file operations from the OS to different mounted file systems. ✓
- ☐ b. is only necessary if running a VM or dual booting.
- ☐ c. can not work with user space file systems.
- ☒ d. is a layer which provides abstraction for various different file systems on the machine. ✓

Your answer is correct.

Question 2

Correct

Mark 1 out of 1

Which of the following are DIS-advantages of using *contiguous file allocation*?

Select one or more:

- ☐ a. TLB misses
- ☐ b. sparse address spaces
- ☒ c. external fragmentation ✓
- ☐ d. traversal latency
- ☒ e. size of file needed before hand (a priori) ✓
- ☐ f. corruption of pointer
- ☐ g. large file overhead

Your answer is correct.

Question 3

Correct

Mark 1 out of 1

What is the major DIS-advantage of using linked-list allocation?

Select one:

- ☒ a. has high overhead to perform random access ✓
- ☐ b. has higher overhead costs than indexing
- ☐ c. requires additional blocks to store links
- ☐ d. cannot be used with sequential access

Your answer is correct.

Question 4

Correct

Mark 1 out of 1

Which of the following are used by the *inode* in UNIX-based file systems for block allocation?

Select one or more:

- ☐ a. block bitmap
- ☒ b. double indirect blocks ✓
- ☐ c. linked blocks
- ☒ d. indirect blocks ✓
- ☒ e. tripe indirect blocks ✓
- ☒ f. direct blocks ✓
- ☐ g. bitmap allocation

Your answer is correct.

Question 5

Correct

Mark 1 out of 1

FAT(File Allocation Table) is a form of indexed allocation file structure.

Select one:

- ☐ True
- ☒ False ✓

Question 6

Correct

Mark 1 out of 1

Linked List allocatiions as well as FAT both suffer from traversal latency.

Select one:

- ☒ True ✓
- ☐ False

Question 7

Correct

Mark 1 out of 1

What is meant by free space management?

Select one:

- ☐ a. releasing the kernel memory allocated for open files
- ☐ b. keeping list of free space in memory mapped files
- ☐ c. keeping track of position for next byte of data in a file
- ☒ d. keeping track of unallocated blocks



Your answer is correct.

Question 8

Correct

Mark 1 out of 1

What method is used to increase performance of any file system structure?

Select one:

- ☐ a. limiting number of shared files
- ☐ b. limiting the number of open files
- ☐ c. placing the file data in swap space
- ☒ d. caching file data



Your answer is correct.

Question **9**

Correct

Mark 1 out of 1

What method has successfully been applied to file consistency maintenance?

Select one:

- ☐ a. linked list consistency checking
- ☐ b. logging operations in system log
- ☐ c. circular buffer for data retention
- ☒ d. log-based transaction file systems



Your answer is correct.

Question **10**

Correct

Mark 1 out of 1

What is NFS?

Select one:

- ☐ a. a network file system mounting protocol
- ☐ b. an implementation of a network file system
- ☐ c. a specification of a network file system
- ☒ d. both a specification and an implementation of a network file system



Your answer is correct.