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⸬ **Question**   **1 pts**

Which of the following information about a file is NOT contained in the inode:

swer

○ file data

○ file data block addresses

○ owner of the file

○ access/modify times

○ whether it is a directory or regular file

⸬ **Question**   **1 pts**

Suppose:
block size = 1KB,
number of direct pointers in inode = 14
size of a pointer = 4 bytes.

If inode also has one indirect pointer, what is the largest file that has be stored in the disk?

swer

○ ~270 KB

○ ~4.1 MB

○ ~4.5 GB

○ ~1.3 MB

○ ~140 KB

⸬ **Question**   **1 pts**

When the following system call is executed by the OS:

```
open("/home/user/file.txt", O_RDONLY)
```

how many inodes and data blocks are accessed?

swer

○ 4 inodes, 3 data blocks

○ 4 inodes, 1 data block

○ 1 inode, 3 data blocks

○ 1 inode, 1 data block

⦂⦂ Question   **1 pts**

The following is an example of redundancy through mirroring:

1
3
5
7

Disk 1

1
3
5
7

Disk 2

2
4
6
8

Disk 3

2
4
6
8

Disk4

The loss of which pair of disks will cause it to fail?

swer   ○ Disks 1 and 2

○ Disks 1 and 3

○ Disks 1 and 4

○ Disks 2 and 3

○ Disks 2 and 4

⦂⦂ Question   **1 pts**

The only problem with RAID level 4 (shown in the figure) is:

Disk 0	Disk 1	Disk 2	Disk 3	Disk 4
0	1	2	3	P0
4	5	6	7	P1
8	9	10	11	P2
12	13	14	15	P3

swer   ○ Random writes are slow due to bottleneck of parity update

○ Capacity is worst

○ Steady state writing is slow due to bottleneck of parity update

○ Steady state reading is slow due to bottleneck of parity update

○ Random reading is slow due to bottleneck of parity update

⦂⦂ Question   **1 pts**

What is the primary purpose of process abstraction in an operating system?

○ To isolate and protect processes from each other.

○ To optimize CPU clock speeds for better performance

○ To control the physical memory allocation of a computer

○ To enhance the graphical user interface (GUI) of the operating system

⁞⁞ Question   **1 pts**

Which of the following process state transitions is NOT possible?

○ Ready to Waiting

○ Running to Ready

○ Running to Waiting

○ Waiting to Ready

○ Ready to Running

⁞⁞ Question   **1 pts**

✎ ✕

In a Unix-like operating system, which of the following best describes the behavior of the fork() and wait() system calls?

○ fork() creates a new child process, and wait() suspends the parent process until the child process completes

○ fork() suspends the current process, and wait() creates a new child process.

○ fork() terminates the current process, and wait() resumes it after a child process completes.

○ fork() creates a new child process, and wait() continues the execution of the parent process concurrently with the child process.

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