

**COSC 3360/6310  
FIRST QUIZ  
ANSWERS**

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We follow the order of  
Version B



# Question 1

- What is the major disadvantage of *not having privileged instructions*?
  - A. Unrestricted user access to the data on the hard drive.
  - B. Too many context switches.
  - C. Both **A** and **B**.
  - D. None of the above.



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## Question 2

- In a ***vectorized interrupt*** system, an interrupt can only be interrupted by an interrupt of ***higher priority***.

A. TRUE

B. FALSE



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## Question 3

- A program in execution is called
  - A. A channel.
  - B. A function.
  - C. A procedure.
  - D. A process.



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## Question 4

- What is the major reason for the success of *modular kernels*?
  - A. They make kernels more secure.
  - B. They let users add extensions to the kernel.
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## Question 5

- Each process has its own Process Control Block.

**A. TRUE**

**B. FALSE**



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**A. TRUE**

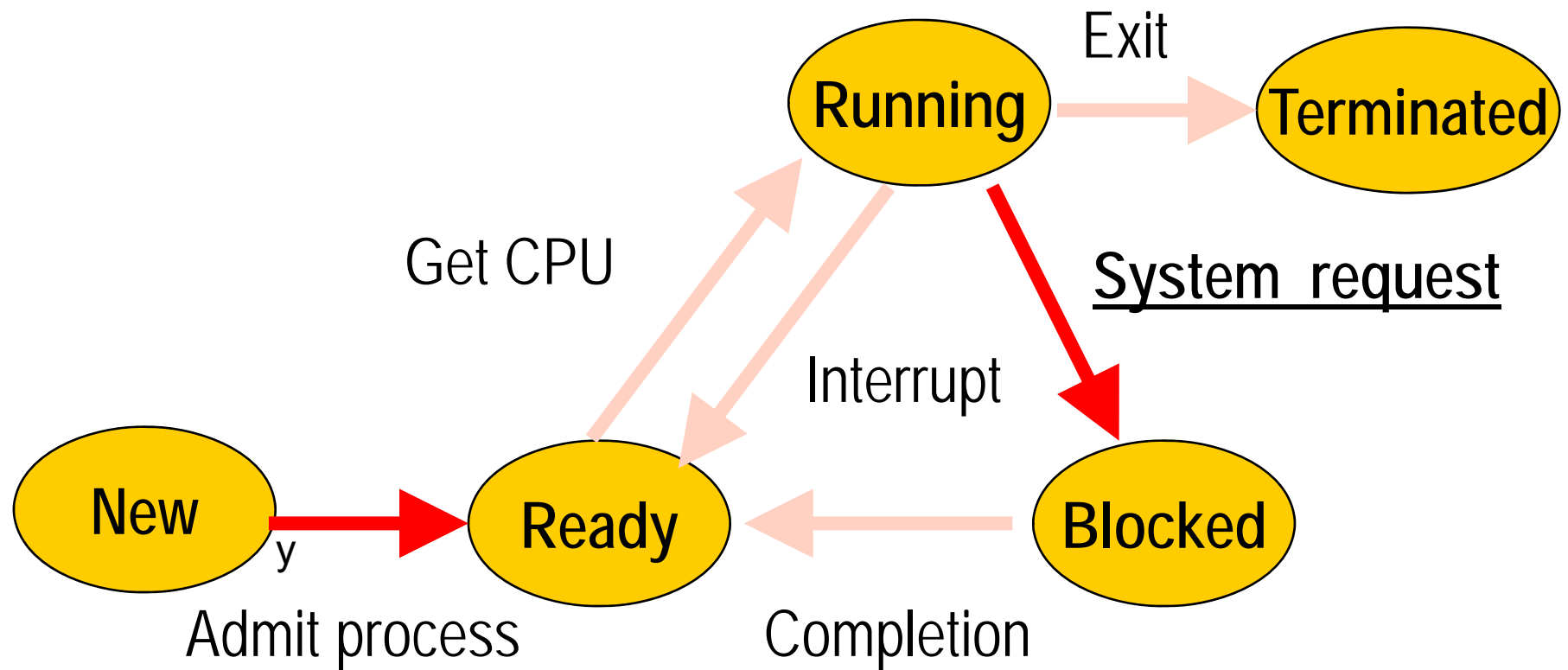
**B. FALSE**



## Question 6

- Which of these events can move a process from the *running* state to the *blocked* state?
  - A. The process performs a system call.
  - B. The process is swapped out.
  - C. A timer interrupt.
  - D. All of the above.

# The big diagram





## Question 6

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## Question 7

- Which of the following statements apply to the *program.cs.uh.edu* server?
  - A. It is an interactive system.
  - B. It is a time-sharing system.
  - C. Both **A** and **B**.
  - D. None of the above.





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## Question 8

- How many lines will the following program print?

```
□ main(){  
    cout << "Hello!\n";  
    fork();  
    cout << "Goodbye!\n";  
} // main
```

**A.** One line

**B.** Two lines

**C.** Three lines

**D.** Four lines



# Let us check (I)

```
$ more quiz1.cpp
#include <iostream>
#include <unistd.h>
using namespace std;

main(){
    cout << "Hello!\n";
    fork();
    cout << "Goodbye!\n";
} // main
```



## Let us check (II)

```
$ g++ quiz1.cpp -o quiz1.exe
```

```
$ ./quiz1.exe
```

```
Hello!
```

```
Goodbye!
```

```
Goodbye!
```



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## Question 9

- Which system call is used to send a signal to another process?
  - A. `exec()`
  - B. `kill()`
  - C. `notify()`
  - D. `signal()`



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## Question 10

- Which of the following operating systems is **not derived** from UNIX?
  - A. Android.
  - B. Chrome.
  - C. MacOS.
  - D. Windows.





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# Question 11

- Which one of the following is *not shared* by threads that share the same address space?
  - A. Their stacks.
  - B. Their program counters.
  - C. Both **A** and **B**.
  - D. Neither **A** nor **B**.



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## Question 12

- Which of the following statements about the **fork()** system call is **false**?
  - A. Both child and the parent processes share the same opened file descriptors.
  - B. fork() returns zero in the child process.**
  - C. **fork()** returns zero in the parent process.
  - D. The child process has an identical copy of the address space of the parent.



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- Which of the following statements about the **fork()** system call is **false**?
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## Question 13

- Which system call returns the process ID of a terminated child?
  - exit ()**
  - fork()**
  - signal()**
  - wait()**



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  - A. `exit ()`
  - B. `fork()`
  - C. `signal()`
  - D. `wait()`**



## Question 14

- The time required to create a new thread in an existing process is:
  - A. A function of the number of threads already created by the process.
  - B. Greater than the time required to create a new process.
  - C. Less than the time required to create a new process.
  - D. More or less equal to the time required to create a new process.





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## Question 15

- The **execv()** system call specifies which new program a process should execute.

**A. TRUE**

**B. FALSE**



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# Alternate question on Version A

- The **execv()** system call creates a new process.

**A. TRUE**

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## Question 16

- Which hardware mechanism allows a device to notify the CPU of an event?
  - A. Interrupts.
  - B. Polling.
  - C. System calls.
  - D. Upcalls.



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## Question 17

- Which of these events can move a process from the *running* state to the *ready* state?
  - A. A timer interrupt.
  - B. The arrival in the ready state of a higher-priority process.
  - C. Both **A** and **B**.
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# Question 17

- Which of these events can move a process from the *running* state to the *ready* state?
  - A. A timer interrupt.
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# Alternate question on Version A

- Which of these events can move a process from the *running* state to the *blocked* state?
  - A. A timer interrupt.
  - B. The process performs a system call.
  - C. The process is swapped out.
  - D. All of the above.



# Question 18

- In which queue is a newly created process initially put?
  - A. Device queue.
  - B. I/O queue.
  - C. Ready queue.
  - D. Waiting queue.



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## Question 19

- Memory protection is normally done through *privileged instructions*.

**A. TRUE**

**B. FALSE**



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## Question 20

- Delaying disk—or SSD—writes
  - A. Increases the number of context switches.
  - B. May result in lost data if the system crashes.
  - C. Both **A** and **B**.
  - D. Neither **A** nor **B**.



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## Question 21

- Which of the following applications is a real-time application with soft deadlines?
  - A. An interactive computing session.
  - B. Industrial process control.
  - C. Watching a video.
  - D. Missile guidance.



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## Question 22

- Which of the following statements does **not** **apply** to microkernels?
  - - A. They are extensible.
    - B. They are faster than most other kernel organizations.
    - C. They are more reliable than most other kernel organization.
    - D. None of the above.



## Question 22

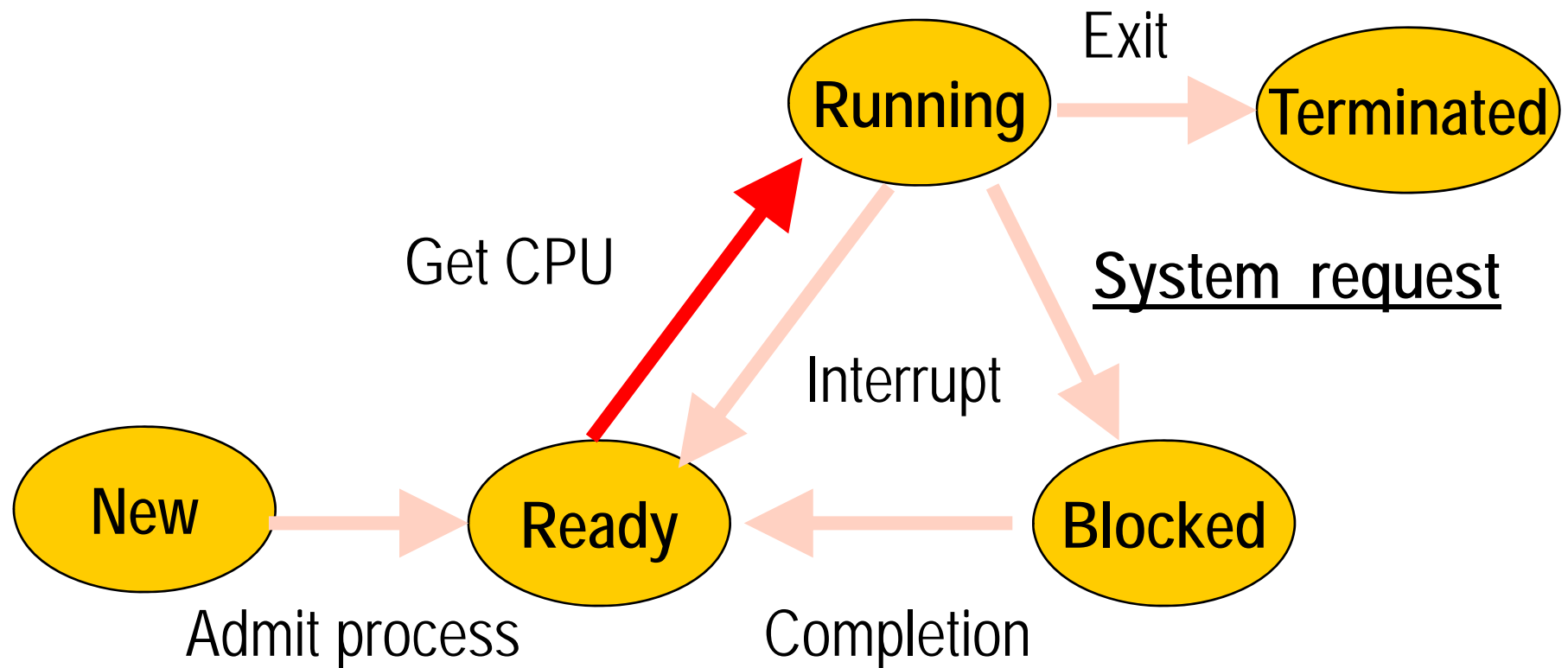
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## Question 23

- A process in the ***ready state*** can only move from that state to the:
  - A. Blocked state.
  - B. New state.
  - C. Running state.
  - D. Terminated state.

# The big diagram





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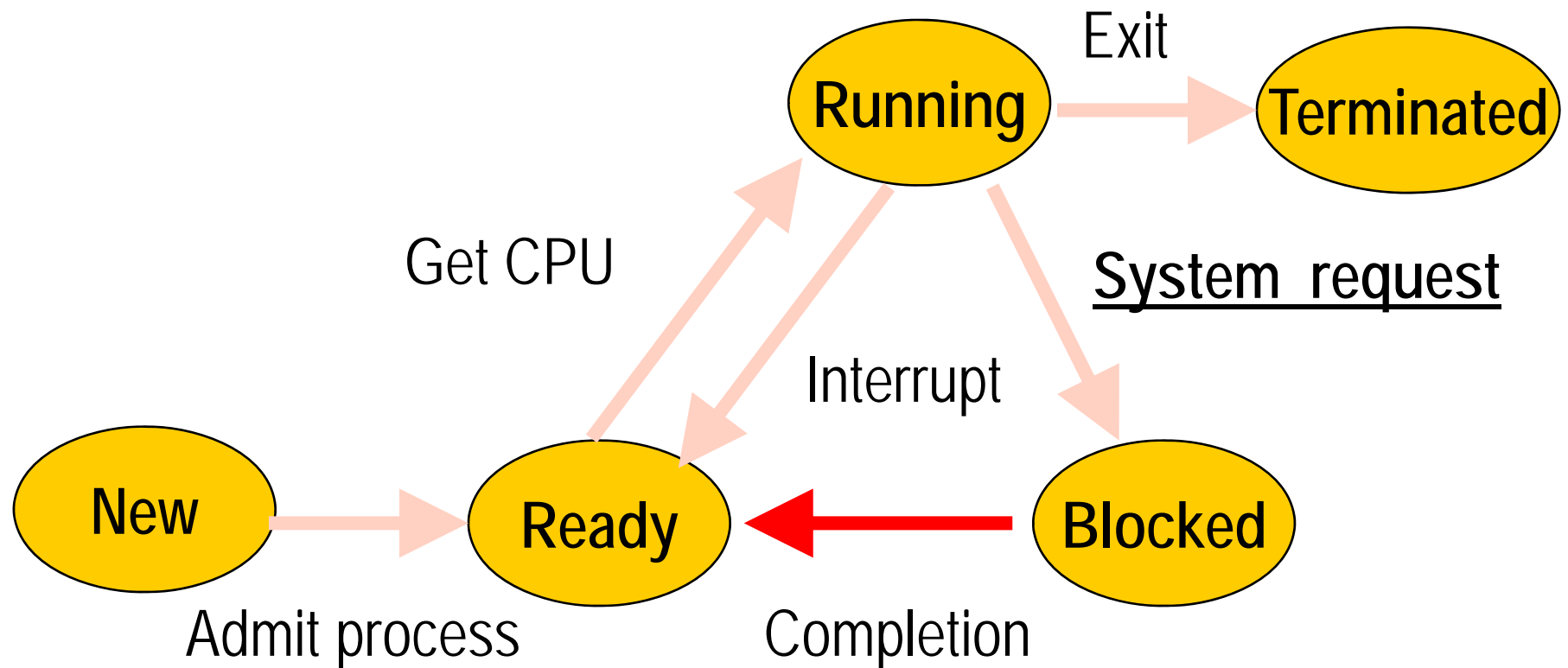


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- A process in the ***blocked state*** can only move from that state to the:
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# The big diagram





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## Question 24

- Which of the following actions are the *normal result* of a system call?
  - A. An interrupt occurs.
  - B. The calling process is moved to the suspended state.
  - C. Both **A** and **B**.
  - D. None of the above.



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## Question 25

- What is the ***default action*** a Linux process takes when it receives a signal from another process?
  - A. It acknowledges it.
  - B. It catches it.
  - C. It ignores the signal.
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# Version A Key

- Page 1: C C A A A B
- Page 2: B C D B C B
- Page 3: A A C A C B B
- Page 4: C B C A A B



# Version B Key

- Page 1: A A D B A A
- Page 2: C B B D C C
- Page 3: D C A A C C B
- Page 4: B C B C A D