

Question 1

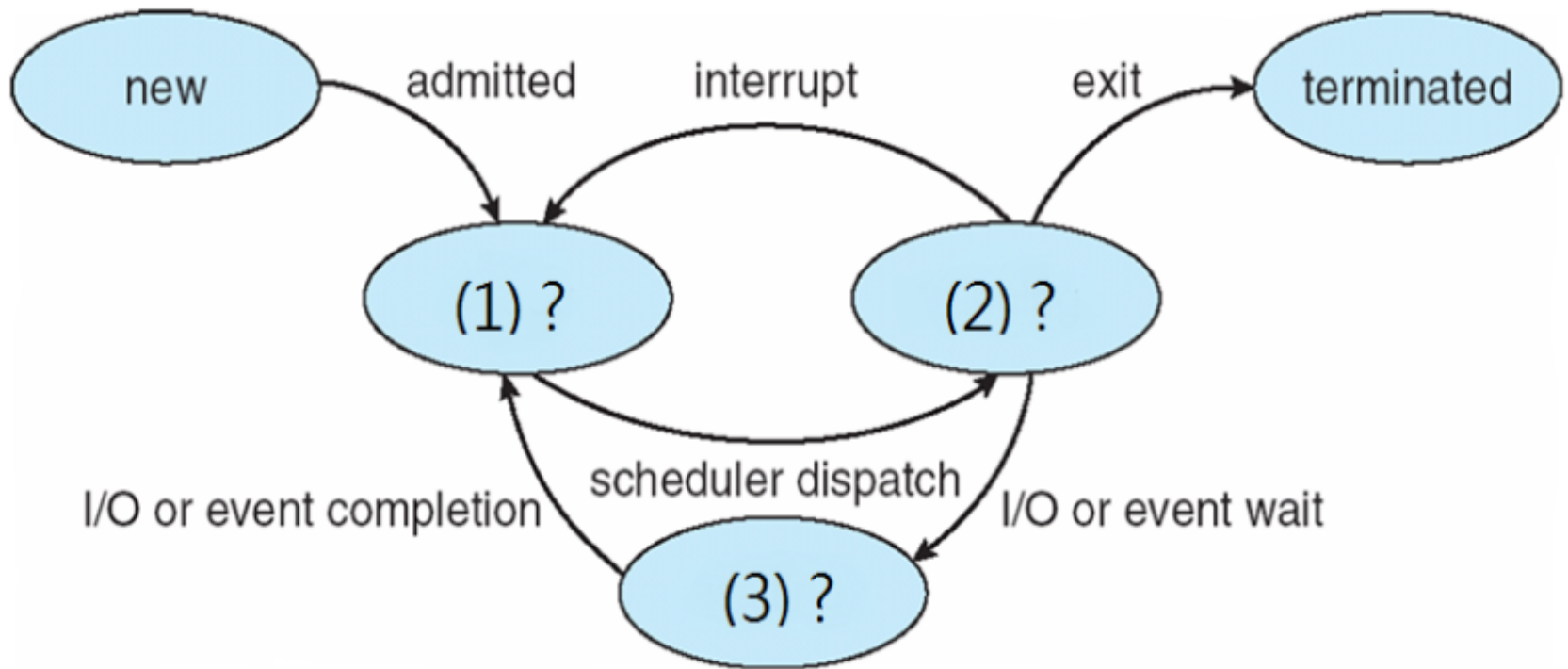
- ▶ Assume that the fork() function is always successful
- ▶ Please show me the output

```
#include<sys/types.h>
#include<stdio.h>
#include<unistd.h>
int main()
{
    pid_t pid, pid2;
    pid = fork();
    if (pid == 0)
    {
        printf("Hello, ");
        pid2 = fork();
        if (pid2 != 0)
        {
            wait(NULL);
            printf("the OS quiz ");
        }
        else
        {
            printf("I would say that ");
        }
    }
    else
    {
        wait(NULL);
        printf("is quite easy!\n");
    }
    return 0;
}
```



Question 2

- ▶ Please indicate the states of (1), (2), and (3) of the following figure.



Question 3

- ▶ Assume that the `fork()` function is always successful
- ▶ Please show me the output

```
#include<sys/types.h>
#include<stdio.h>
#include<unistd.h>
int main()
{
    pid_t pid, pid2;
    printf("Statement 1 !\n");
    pid = fork();
    if (pid > 0)
    {
        wait(NULL);
    }
    else
    {
        pid2 = fork();
        if (pid2 == 0)
        {
            printf("Statement 2 !\n");
        }
        else
        {
            wait(NULL);
            printf("Statement 3 !\n");
        }
        printf("Statement 4 !\n");
    }
    printf("Statement 5 !\n");
    return 0;
}
```



Answers

- ▶ Question 1: (Both of Answer 1 and Answer 2 are correct.)
 - Answer 1: Hello, I would say that the OS quiz is quite easy!
 - Answer 2: Hello, I would say that Hello, the OS quiz is quite easy!
- ▶ Question 2:
 - (1) ready (2) running (3) waiting
- ▶ Question 3:
 - Staement 1 !
 - Staement 2 !
 - Staement 4 !
 - Staement 5 !
 - Staement 3 !
 - Staement 4 !
 - Staement 5 !
 - Staement 5 !

