Operating Systems, 4th year	Suez Canal University
Quiz (worth 15 Points)	Faculty of Computers and Informatics
2nd Nov. 2015	Dr. Ahmed Sallam
Section: ------------	الاسم: --

1. (5 Points**) True (T) or False (F), and state Why?:**

a. An operating system is interrupt driven.   [T   ]

    OS events are signaled by interrupts from either the hardware or the software

b. In DMA structure, Only one interrupt is generated per block, rather than the one interrupt per byte. [T   ]

    Because Direct memory access allow devices to access the memory directly without processor intervene

c. Context switch describes the procedure of moving parts of the main memory to the hard disk to decrease

    the multiprogramming load.   [F   ]

    Swapping

d. 'windows.h' is a standard c library follow the POSIX specification to connect to the system calls.   [F   ]

    Unistd.h

e. The microkernel system structure is usually called monolithic.   [F   ]

    Kernel

2. (5 Points**) Complete the following sentences:**

a.   Asymmetric is a type of Multiprocessors system where each processor is assigned a specific task, while

    Symmetric is another type where each processor performs all tasks.

b. System programs provide services such as file manipulation , status information, and programming language support

c. Timesharing (multitasking) describes when the CPU switches jobs so frequently that users can interact with each

    job while it's running , creating interactive computing.

3. (5 Points**) Write a C language <u>pseudo</u> code to create an <u>orphan</u> child process which executes the 'ls' Linux command.** *Note: provide your answer behind.*

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الاسم: --

```
1.    #include <sys/types.h>
2.    #include <stdio.h>
3.    #include <unistd.h>
4.
5.    void main()
6.    {
7.       pid_t pid,pid_temp;
8.       pid = fork();
9.
10.      if(pid<0) //error
11.         printf("Fork Failed");
12.      else if (pid == 0)
13.      {
14.         execlp("/bin/ls","ls", NULL);
15.      }
16.      else
17.      {
18.         int state;
19.       //  pid_temp=wait(&state); the idea behind orphan child is to remove the wait function
20.         printf("I am the parent and the childs pid is %d\t%d\n",pid,state );
21.      }
22.   }
```

Note: it's not important to write a runnable program. line 12, 14, and 19 is the main answer of this question.