

1. 2016-1

Circle or cross: "T" if True – "F" if False.

- T / F A bus is a CPU system that transfers data between components inside a computer, or between computers (WIKI).
- T / F Port-mapped I/O uses the same address bus to address both memory and I/O devices (WIKI).
- T / F The kernel I/O subsystem is the largest part of a kernel system (Silber9).
- T / F Performance can be improved by utilizing dedicated hardware and hard-coded algorithms (Silber9).
- T / F Embedded algorithms in a device controller could conflict with the applications, causing decreased performance (Silber 9).
- T / F Polling for an I/O completion can waste a large number of CPU cycles if the processor iterates a busy-waiting loop many times before the I/O completes (Silber9).
- T / F DMA (Direct Memory Access) increases system concurrency (Silber9).
- T / F The STREAMS driver modifies the flow of data between the user interface and the driver (Silber9).
- T / F Device driver encapsulate device details to avoid uniform device-access interface to I/O subsystem (Silber9).
- T / F An asynchronous process suspended until I/O completed (Silber9).

2. 2016-2

This following is a part of script `/etc/init.d/sudo`:

```
### part of /etc/init.d/sudo
N=/etc/init.d/sudo
case "$1" in
    start)
        # make sure privileges don't persist across reboots
        if [ -d /var/lib/sudo ]
        then
            find /var/lib/sudo -exec touch -d @0 '{}' \;
        fi
        ;;
    stop|reload|restart|force-reload|status)
        ;;
    *)
        echo "Usage: $N {start|stop|restart|force-reload|status}" >&2
        exit 1
        ;;
esac
exit 0
```

Print the output when the system runs:

- (a) `/etc/init.d/sudo stop`
- (b) `/etc/init.d/sudo dodol`

3. 2017-1

Circle or cross: "T" if True – "F" if False.

- T / F** Unified Extensible Firmware Interface (UEFI) is the successor to BIOS (Basic Input/Output System).
- T / F** UEFI can prevent boot-time viruses from loading (secure boot).
- T / F** Both BIOS and UEFI support Master Boot Record (MBR) partitioning scheme.
- T / F** UEFI supports partitioning scheme that changes border of a homeland territory.
- T / F** UEFI is a specification. Therefore each implementation may be different.
- T / F** The POST (Power On Self Test) checks if the Operating System is ready to run.
- T / F** GRUB (GRand Unified Bootloader) is an operating system independent boot loader.
- T / F** There are 3 GRUB versions: GRUB 1, GRUB 1.5, and GRUB 2.
- T / F** Major Linux distributions are adopting "systemd".
- T / F** The task of "systemd" is much more than "init system" because it also handles device management, power management, mount points, cron, encryption, syslog, network config, etc.