

3 A student has a computer.

(a) The computer is designed using the Von Neumann model for a computer system.

Complete the table by describing the purpose of each of the given registers.

Register	Purpose
Program Counter (PC)
Memory Address Register (MAR)
Memory Data Register (MDR)
Index Register (IX)

[4]

(b) The student needs to connect the computer to a monitor that has a screen resolution of 2560 × 1600 pixels. The monitor also has built-in speakers.

The computer has a Video Graphics Array (VGA) port and a High Definition Multimedia Interface (HDMI) port.

Explain the benefits of connecting the monitor to the computer using the HDMI port instead of the VGA port.

.....
.....
.....
.....
.....
.....
.....
.....

[4]

(c) The computer has an Operating System (OS). One of the key management tasks of the OS is process management.

Describe the process management tasks performed by an OS.

.....
.....
.....
.....
.....
.....
.....
.....

[4]