1 **(a)** The table has six statements about the Von Neumann model for a computer system. Three of the statements are incorrect.

Statement number	Statement
1	The Program Counter (PC) stores the next instruction to be fetched from memory.
2	The Arithmetic and Logic Unit (ALU) performs mathematical and logical operations.
3	The Control Unit (CU) sends signals to other components on the data bus.
4	The Memory Data Register (MDR) transfers data to the memory address stored in the Memory Address Register (MAR).
5	The MAR stores an address from memory.
6	The Accumulator (ACC) stores the result of calculations.

Complete the table by writing the **three** incorrect statement numbers and the corrected statements.

Incorrect statement number	Corrected statement
.....	....
.....	....
.....	....

[3]

(b) Registers that are used in the Fetch-Execute (F-E) cycle include the PC, MAR, MDR and the ACC.

Identify **one** other register and describe its role in the Fetch-Execute (F-E) cycle.

Register .....

Role .....

.....

[2]

(c) Explain how an interrupt from an input device will be detected and handled in the F-E cycle.

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..... [4]