



12 Pages

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can either ignore illegible script or have it typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

List the numbers of the questions you have attempted	Office Use
Q1	18
Q2	02
Q3	11
Q4	04
Total	35/100

(Gweler yr ochr arall am y fersiwn Cymraeg)

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b)

- i) When the button is pressed the LED light switches from LED 2 to LED 1. When the button is pressed LED 1 lights up green and LED 2 turns off.
- ii) The LEDs are controlled using PORT B as LED 1 is connected to RB0 and LED 2 is connected to RB1. Both LEDs are then connected to a 220Ω resistor and then connected to ground.
- iii) The role of RB4 in input detection and ~~control~~ logic control is to be an input for the button that needs to be pressed. The button is connected to pin RB4 as it's an input source, allowing an input when given the correct command as the button is connected to a power source.

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$$\frac{11}{25}$$

Q3

Question 4

- Specifies the pins*
- a) The operation performed by the program when executed, is an LED turning on if the input button is pressed. When the button is pressed, the LED will turn on, after this a display message will show on the virtual terminal; displaying LED ON. After a delay, the LED will turn off and the virtual terminal will display LED OFF.

OK

Checked from the answer

Q1 $\frac{18}{25}$

Q2 $\frac{22}{25}$



Question No.

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