



Examination Answer Books

12 Pages

Instructions to Candidates

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 type 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.

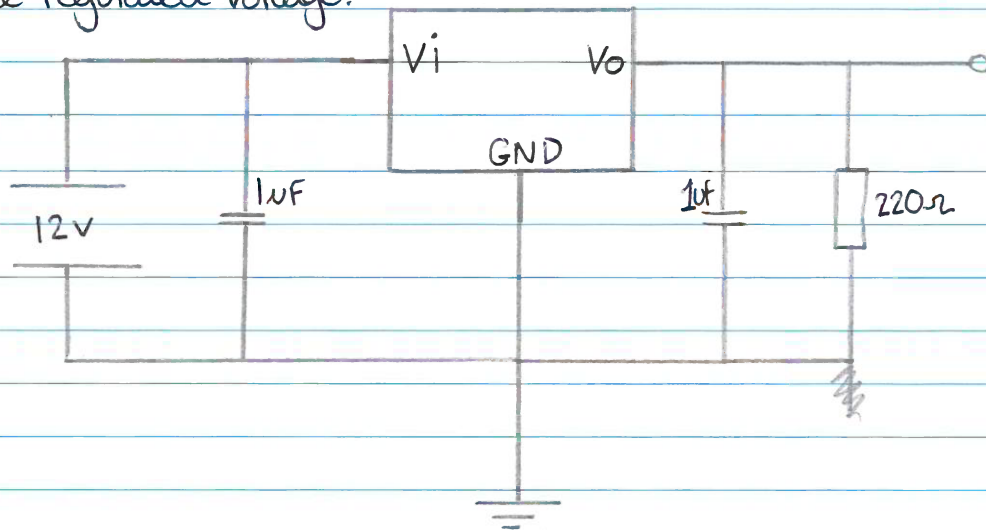
1	Student Number	2414414
2	Title of Examination Paper	Electronics 1
3	Module Code	ACDB5002
4	Date and Time of Examination	16/01/2026 10:00
5	Examination Venue	Iq 208
6	Seat Number	5
7	Number of Answer Books handed in	1

List the numbers of the questions you have attempted	Office Use
(i)	15 ✓
(ii)	5 ✓
(iii)	4.5 ✓
(iv)	2.5 ✓
(v)	11 ✓
(vi)	10 ✓
Total	48/100 ✓

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- (Vi) V_{SS} is the ground
 V_{DD} is the +5v power supply
 V_{EE} is the Contrast Control
 RS is the Command and data. Command = 0 and data = 1
 RW is the write and read. Write = 0 and read = 1
 E is the enabling pin
 $DO-D7$ are the data pins in a 4-bit mode.

- (V)b The voltage regulator has an unregulated DC voltage on one pin (V_i). The second terminal is connected to ground. Finally there is an outgoing regulated DC voltage (V_o). Voltage probes can be used to check the regulated voltage.



- (V)a The operation of a night light circuit will detect the light in the proteus circuit ^{which} is the torch. When the torch is near it will have a high ^{Voltage} ~~resistance~~. So no LED will be on as this is the 'bright condition'. If no light is detected the circuit will have a low ^{Voltage} ~~resistance~~ and this will cause the LED to operate in the 'Dark Condition'. The circuit can operate with any light like Sun light it doesn't have to have a torch held near or far for operation. There will be a low ^{OF} ~~output~~ ^{output} ~~be~~ 0v in darkness and a high output of 5v in darkness.

Marks from the screenshots

- (i) $\frac{15}{20}$ ✓
- (ii) $\frac{5}{10}$ ✓
- (iii) $\frac{4.5}{20}$ ✓
- (iv) $\frac{2.5}{20}$ ✓