



12 Pages

1. Please give the information requested in the boxes below
2. Enter your name in the space provided to the right, fold cover 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 mark it as incorrect, at their discretion. This will be 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	2245084
2	Title of Examination Paper	computer. A
3	Module Code	ACCA 4022
4	Date and Time of Examination	22-11-23 10.00 AM
5	Examination Venue	Q P
6	Seat Number	C 3
7	Number of Answer Books handed in	

List the numbers of the questions you have attempted	Office Use
1	~~45~~ 23
2	2
3	0
4	~~8~~ 6
5	~~8~~ 3
6	02
7	02
Total	~~21~~ 38

(Gweler yr ochr arall am y fersiwn Cymraeg)



Prifysgol Cymru
University of Wales
Trinity Saint David

Llyfr Atebion Arholiadau

12 Tudalen

Cyfarwyddiadau i Ymgeiswyr

1. Rhwch yr holl wybodaeth y gofynnir amdani yn y blychau isod.
2. Rhwch eich enw yn y lle a ddarparwyd ar y dde, plygwch ef a'i sellio i lawr (gan dddefnyddio'r label a ddarparwyd) i guddio'ch enw.

1. Rhaid i'r atebion fod mewn llawysgriflen ddatlennadwy. Gall yr Arholwyr naill ai anwybyddu sgript annarlenadwy, neu drefnu iddi gael ei theipio a chael yr ymgeisydd i dalu.
2. Rhaid dychwelyd pob llyfr. Ni chaniateir mynd â llyfrau atebion, wedi eu defnyddio neu heb eu defnyddio, allan o'r lleoliad arholi o dan unrhyw amgylchiad.
3. Os defnyddir mwy nag un llyfr, rhwymwch hwy gyda'i gilydd gan ddefnyddio'r tagiau sydd ar gael oddi wrth y gwyllwyr/gwilyr.
4. Ni ddylid rhwgo unrhyw ran o'r llyfr hwn; rhaid ei gyflwyno yn gyfan.
5. Dechreuwch bob ateb ar dudalen newydd. Gwnewch unrhyw fras nodiadau yn y llyfr atebion a thynnwch i'nnell drwyddynt.
6. Ysgrifennwch eich atebion mewn inc.

[illegible]

(See the other side for English version)

CYFENW:

ENW(AU) CYNTAF:

Llenwch, plynwch a seliwch
(gweler nodyn 2 isod)

i) Convert the following numbers to Binary (Base 2)

a. $(769)_{10}$

5
11

769
1 384 2
0 192 2
0 96 2
0 48 2
0 24 2
0 12 2
0 6 2
1 3 2
1 1 2
1 0 2

$(110000001)_2$

b. $(9A2)_{16}$

$(100110100010)_2$

ii) Convert the following Number to Octal (Base 8)

a: $(87)_{10} = (127)_8$

		87		8
7		10		8
2		1		8
1		0		8

$(127)_8$

b: $(509)_{16}$

$512 + 256 + 128 + 32 + 0 + 8 + 0 + 0 + 1$

$(937)_{10}$

iii) Convert the following Number to Decimal (Base 10)

a: $(11101001)_2$

~~128~~

$$b: (50E)_{16}$$

$$1280 + 0 + 14 = (1294)_{10}$$

215

iv) Convert the following numbers to Hexadecimal (Base 16)

$$a: (4278)_{10}$$

$$(10B6)_{16}$$

X

~~(0000000000000000)~~

	4278	16
6	267	16
11	16	16
0	1	16
1	0	

$$b: (670)_8$$

$$(011001100000)_{2}$$

X

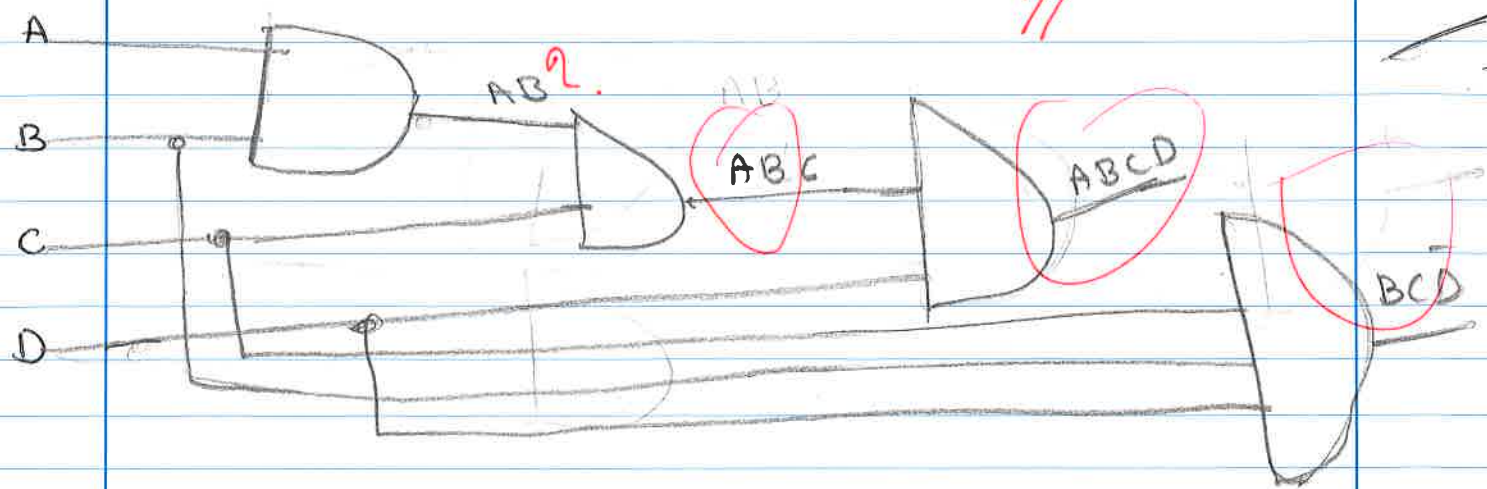
categorise the following hardware based on its usages into the following categories:

- (a) CPU (b) Memory (c) Input device (d) Output
(e) Storage device (f) Communication device

- ① RAM (b. Memory) ✓
 ② Ethernet Port (c Input Device) ✗
 ③ MicroPhone (f Communication) ✗ ^{input could be}
 ④ Flash Drive (d output) ✗
 ⑤ Gamepad (c input) ✓

- (4) Construct a logical circuit from the given logical expression and construct a truth table use only basic logic gates (Not, AND, OR)

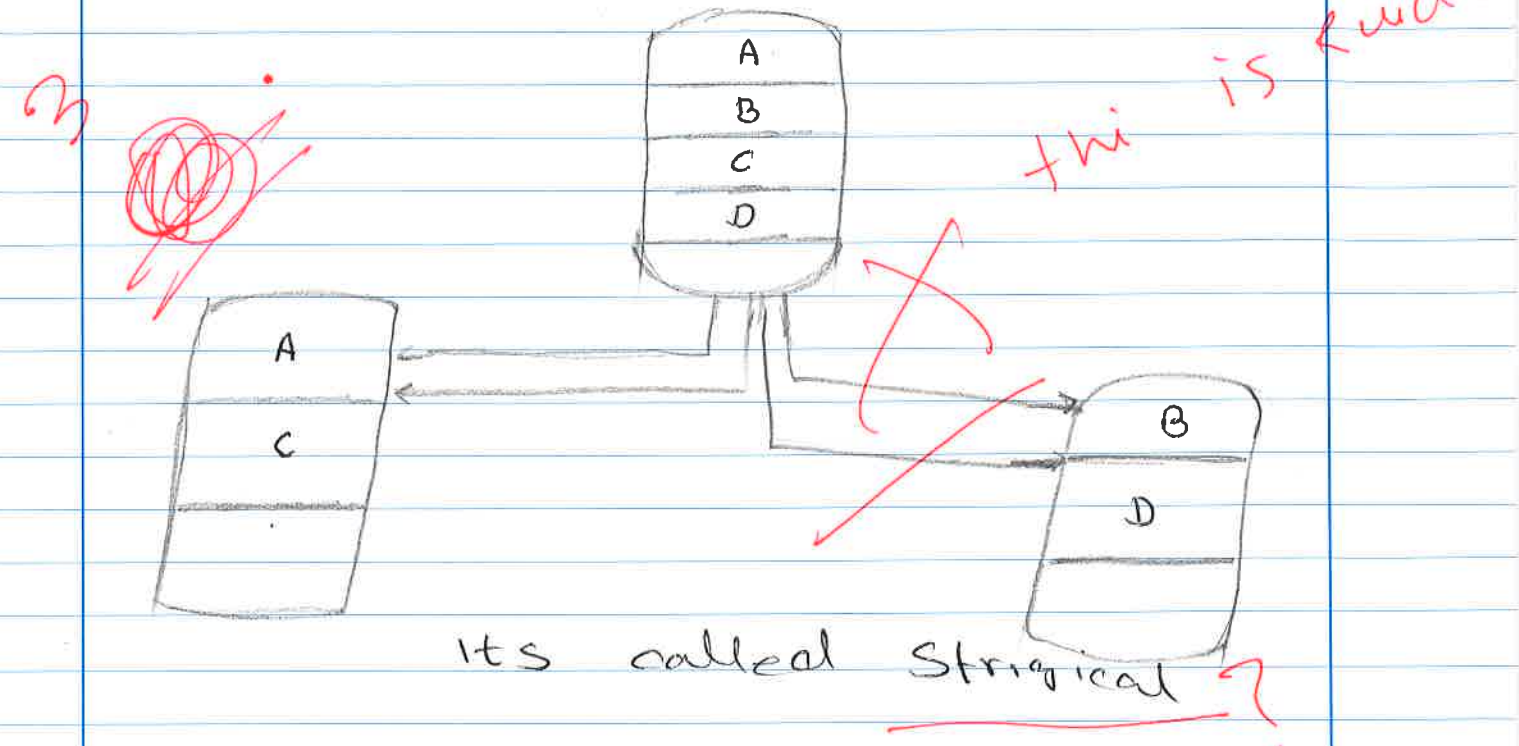
$$X = \overline{A}B + CD + BC\overline{D}$$



⑤

Describe RAID 1 with Suitable diagram.

There are 7 leaves of RAID



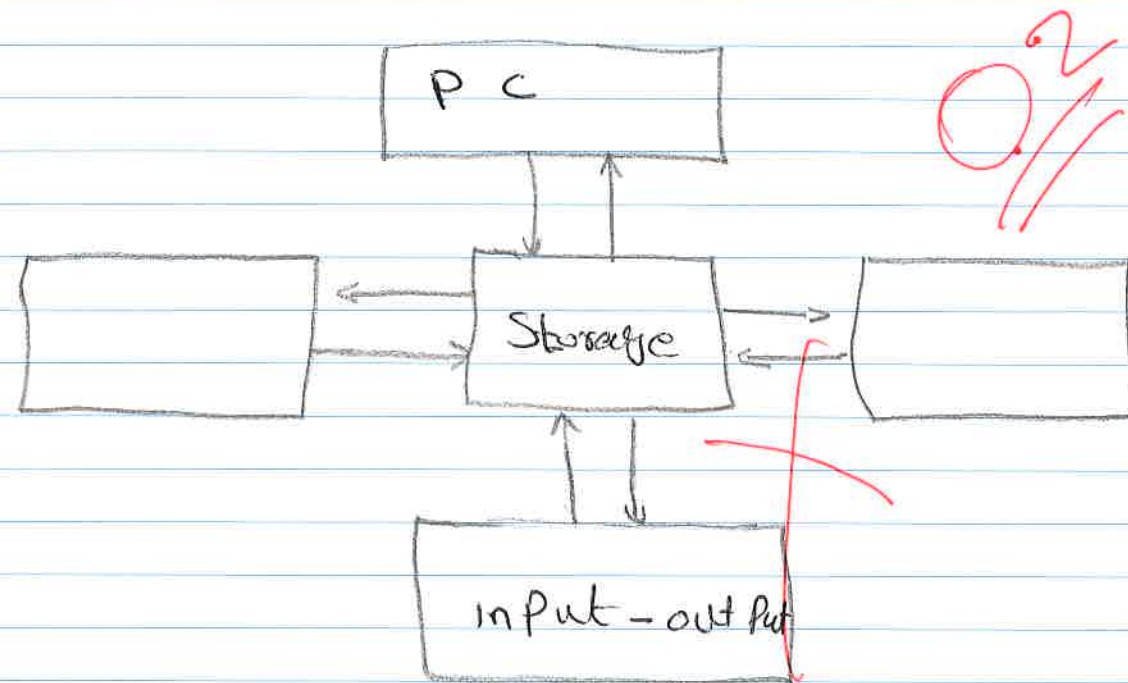
③

50000

Diagram illustrating RAID 1 (Mirroring) configuration using a grid of 0s and 1s. A red 'X' is drawn over the grid, indicating a failure or error.

A	B	C	D	AB	BCD
0	0	0	0	0	0
1	0	0	0	0	0
0	1	0	0	1	1
1	0	1	0	0	1
0	0	0	1	0	0
1	1	0	0	1	0
0	0	0	0	0	1
1	0	1	0	0	1
0	1	0	0	1	1

⑥ a Draw the Fetch - Execute cycle.



⑦ Draw the diagram of Von Neumann architecture.

