

12 Tudalen

1. Rhowch yr holl wybodaeth y gofynnir amdani yn y blychau isod.
2. Rhowch eich enw yn y lle a ddarparwyd ar y dde, plygwch ef a'i selio i lawr (gan ddefnyddio'r label a ddarparwyd) i guddio'ch enw.
3. Rhaid i'r atebion fod mewn llawysgrifen ddarllenadwy. Gall yr Arholwyr naill ai anwybyddu sgrïpt annarllenadwy, neu drefnu iddi gael ei theipio a chael yr ymgeisydd i dalu.
4. Ysgrifennwch eich atebion mewn inc.
5. Dechreuwch bob ateb ar dudalen newydd. Gwnewch unrhyw fras nodiadau yn y llyfr atebion a thynnu llinell drwyddynt.
6. Ni ddylid rhwygo unrhyw ran o'r llyfr hwn; rhaid ei gyflwyno yn gyfan.
7. Os defnyddir mwy nag un llyfr, rhwymwch hwy gyda'i gilydd gan ddefnyddio'r tagiau sydd ar gael oddi wrth y gwyliwr/gwylwyr.
8. 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 amgylchiadau.

(See the other side for English version)

[illegible]

**Llenwch, plygwch a seliwch
(gweler nodyn 2 isod)**

CYFENW: _____

ENW(AU) CYNTAF: _____

1	Student Number	
2	Title of Examination Paper	(Computer architecture and operating systems
3	Module Code	ACCA4022
4	Date and Time of Examination	19 May 2025
5	Examination Venue	68860 T2 C004
6	Seat Number	E5
7	Number of Answer Books handed in	

(Gweler yr ochr arall am y fersiwn Cymraeg)

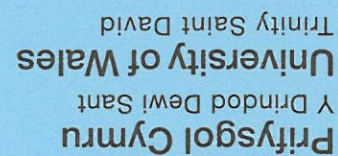
Office Use	List the numbers of questions you have attempted	Total
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	d	
	e	
	f	
	g	
	2a	
	b	
	3a	
	b	
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1. Please give the information requested in the boxes below.
2. Enter your name in the space provided 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.**

Instructions to Candidates

12 Pages

Examination Answer Books



Complete, fold and seal
(see note 2 below)

SURNAME: Edwards

FORENAME(S): ELIS

1B)

1C)

A)

128
64
32
16
8
4
2
1

128 64 32 16 8 4 2 1
1 1 0 1 1 1 1 1

A) 11011101 = 221

16 8 4 2 1
1 0 0 1 1 0

16 + 2 = 18

B) 1111011

A) 1010001

11 - 8 = 3

27 - 16 = 11

59 - 32 = 27

64 32 16 8 4 2 1
1 0 0 1 1 1 1
1 0 0 1 1 1 1
1 0 0 1 1 1 1
1 0 0 1 1 1 1
1 0 0 1 1 1 1
1 0 0 1 1 1 1
1 0 0 1 1 1 1

81 - 64 = 17

123 - 64 = 59

119 - 60 + 60 = 120

1 0 1 1 0 1
8 4 2 1

1 1 1 0
4 2 1

= 1101010

1 1 1 0
8 4 2 1

1 1 1 1 1 0
8 4 2 1
1 1 1 1 1 0

10

1D)

A) $13 = 11 \times 16 = 176$

$3 \times 1 = 3$
 $176 + 3 = 179$

B)

$4 \times 16 = 64$

$(= 12 \times 1 = 12$
 $64 + 12 = 76$

1E)

$65,336$

1F)

1)

$200 \times 300 = 60,000$

$16m = 24 \text{ bits}$

$16 \text{ bits} = 2 \text{ bytes}$

$2.5 = 24 \text{ bits}$

$60,000 \times 2.5 = 150,000 \text{ bytes}$

$120,000 + 30,000$

$150,000 \text{ bytes} = 15,000 \text{ KB}$

ii) ratio $10:1 = \div 10$

$15,000 \div 10 = 1,500 \text{ KB}$

1 (5)

1MB = 8mb

~~25~~
 $200 \times 8 = 1600$

~~200 ÷ 8 = 25~~

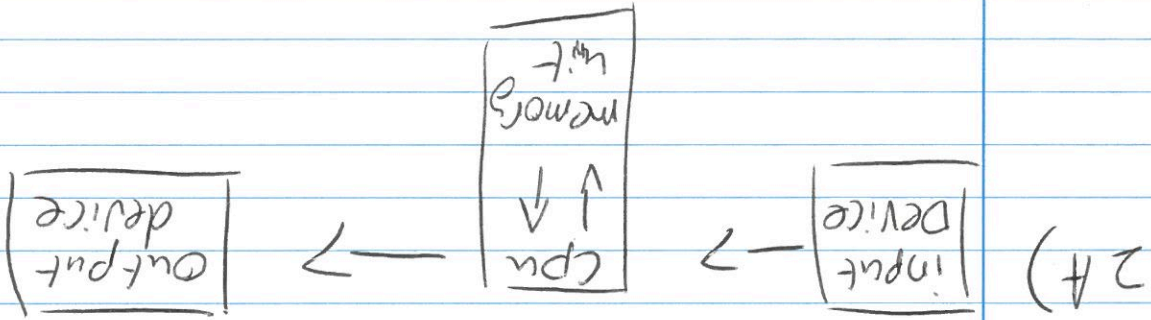
$1600 \div 80 = 20$

20 seconds

~~200 ÷ 25~~

~~160 ÷ 20~~

~~80 ÷ 10~~



2 (3)

Cache is a small amount of powerful memory stored in the CPU used to complete tasks quickly.

3 (4)

i) 3GB

ii) 3TB

iii) 500GB

3 (3)

i) 16B/s

ii) 800mb/s

iii) 500mb/s

3C)

DHCP is a protocol within a local area network that ...

4) For a medium spec PC aimed mostly for gaming I feel an Intel Core i5 will hold up due to its low price point but still being reliable and within recommended specs of most games and is what I personally use.

In my opinion 8GB of Ram doesn't cut it for gaming anymore with games needing more memory 16GB would be more suited to ensure a smoother experience.

Ensuring that there is enough storage for both games and personal files such as HD movies I feel 500GB SSD would allow for maximum storage with smooth loading times whilst still being at a low price.

This PC would need HDMI slots for the TV ensuring smooth connection. It would also require multiple USB ports. For mouse and keyboard connection. As well as this a disk drive would be required, these are hard

to come by in the modern day
put portable USB ones can be
purchased for a small price.
I feel integrated graphics for a
low end gaming PC is no longer
suitable to power games. I feel a Nvidia
graphics * at a low price point will
be able to run most games on a
medium-low graphics and run with a
smooth framerate.

* card

Rhif y Cwestiwn		Arholwr yn unig		Rhif y Cwestiwn		Arholwr yn unig	