



SURNAME:

FORENAME(S):

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.

1	Student Number	
2	Title of Examination Paper	Operating Systems
3	Module Code	ACCA4022
4	Date and Time of Examination	09/05/23 10:00
5	Examination Venue	Gower College 068860 Swansea
6	Seat Number	D2
7	Number of Answer Books handed in	

[illegible]

(Gweler yr ochr arall am y fersiwn Cymraeg)



Prifysgol Cymru
Y Prifddod Dewi Sant
University of Wales
Trinity Saint David

Llyfr Atebion Arholiadau

12 Tüdalen

Cyfarwyddiadau 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, pwygich et all seilio i lawr (gan ddefnyddio'r label a ddarparwyd) i guddio'ch enw.

3. Rhaid i'r atebion fod mewn llawysgriften ddarlennadwy. Gall yr Arholwyr nallu ai anwybyddu sgript 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 ffras nodiadau yn y llyfr atebion a thynnwch llinell ddrwyddynt.
6. Ni ddylid rhwgo 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/gwyliwyr.
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 amgylchladu.

7	Nifer y Llyfrau Atebion a gyflwynwyd	
6	Rhif Sedd	
5	Lleoliad yr Arholiad	
4	Dyddiad ac Amser yr Archoliad	
3	Cod y Modwl	
2	Tali y Papur Arholiad	
1	Rhif Myfyriwr	

(See the other slide for English version)

[illegible]

Lienwch, plygwch a selwch
(gweler nodyn 2 isod)

CYFENW:

ENW(AU) CYNTAF:

$$1a) 23 \mid \{ \phi 000000 \}$$

$$a = 10000$$

$$23 + 23 + 23 =$$

$$1b) 218 \mid \{ \phi 10000 \}$$

$$b = 110000$$

2 4 8 16 32 64 128
256 512

64
128
192

$$4 \mid 218$$

20 80
36 120
44 160
56 200

160
176
192

152 5

$$2a) 10101101 \mid a = 10101101$$

$$2b) 11011 \mid b = 11011010$$

$$3a) 9b) 111100$$

$$3b) c3) 110000$$

$$4a) D3 = 43$$

$$4b) 3B = 38$$

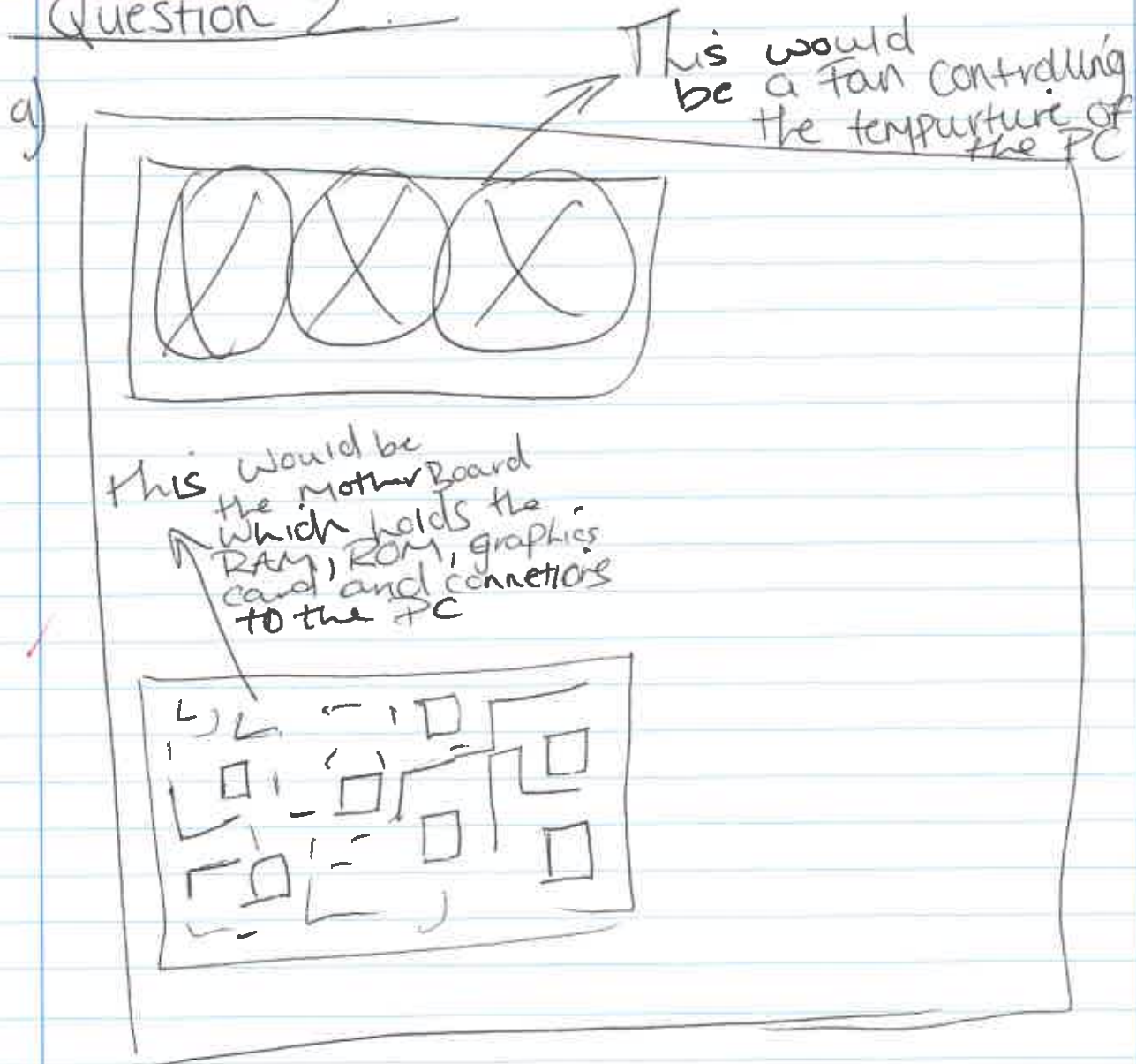
5) = 3 different values can be assigned to a 5 bit number.

$$6i) = 100^*100 \text{ pixels}$$

ii) = The JPG file would compress down by 10x - 100x

2
7) ^{40 seconds}
1 minute would be the time it
takes for a 5Mb file to download

Question 2



Question 3

ai) Double Layer DVD disk = 80 GB

ii) A typical £80 rotating Hard disk in a Desktop Computer
= 360 GB

iii) A £10 USB Flash drive = 1 GB

Bi) 802.11g - Wifi link = 120 MB/s

ii) An average rotating hard disk = 20 MP/s

iii) A typical current NVME M.2 SSD
= 1 GB/s

C) The difference between a hub and a switch is that the hub operates the system for all the devices connected and the switch is to connect the devices to hub

- 1d) A Mac address is the address which tells what system the device is connected too
- 2d) A IP address is the address of where the computer is located to what network, each ~~com~~ device having their own unique IP address

Question 4

- a) CPU = The CPU of choice would be a ~~middle-end~~ would be the Dell i5 which, ~~is because~~ I decided on this CPU because the PC needs to function on a decent speed on the processing unit as it will be operating on a large pixelated TV. Which is needed to operate HD films.
- b) The sensible amount of RAM for this build would be around 180 GB of RAM this can allow the random access memory within the PC to run at a smooth pace whilst being connected to the T.V.
- c) The type of Non Volatile Storage needed would be ROM which you would only need ~~4~~ 1 GB this is because a small amount of excess memory would fall under this (cache)
- d) the ^{input/output} features needed would be that you will need atleast 1 HDMI cable

this is to allow the PC to display onto the T.V., you would also need at least 1 USB cable to connect the keyboard to the PC in order to operate it and another USB cable would be for the mouse linking it to the PC (these USB cables are optional as if you have a wireless keyboard and mouse you will not need one)

The PC will need a keyboard to allow the PC to operate alongside the mouse and T.V.

The ports needed would be at least 2 USB cable ports, 1 HDMI cable port, it will also need a power port to allow the power cable to start the PC.

c) The suitable graphics card the PC would require would be a middle-end one as this PC would need a ~~de~~ okay graphic card in order to run HD on a 42" T.V., but considering that it is not used for anything in the use of ~~of~~ graphics it will not need a high-end graphics card.

1/3

Question No.		Examiner Only		Question No.		Examiner Only	