Name: _____

IAL IT Topic 4 Examiner's Report

Date:

Time:

Total marks available:

Total marks achieved: _____

Examiner's Report

Q1.

This question was about the advantages of changing from a paper-based system, described in the scenario, to an IT system.

Most candidates could produce an answer, but less-able candidates were unable to extend their explanation for a second mark, or wrote about two unlinked points.

A frequent incorrect answer was to claim that an IT system would be cheaper than a paper-based one. This could only achieve marks if the answer went on to explain where the saving would be, eg less admin staff needed.

In the paper-based system orders were taken by phone and recorded on order pads.

At the end of each day the manager reviewed the orders that had been placed and purchased new stock.

Explain **one** advantage **to the company** of changing from a paper-based system to an IT system.

(2)

will cost you less because instead of buying and restocking on paper you will have it stored in a vertal place.
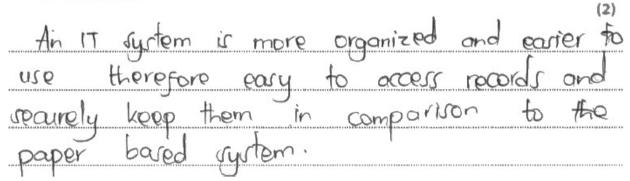
Results Plus: Examiner Comments

Although this answer does give buying less paper as a reason for an IT system costing less, it did not receive a mark because IT systems tend to be expensive to purchase, run and maintain, and also use quite a lot of paper.

Total: 0 Marks

In the paper-based system orders were taken by phone and recorded on order pads.

At the end of each day the manager reviewed the orders that had been placed and purchased new stock.

Explain **one** advantage **to the company** of changing from a paper-based system to an IT system.

(2)

An IT system is more organized and easier to use therefore easy to access records and securely keep them in comparison to the paper based system.

Results Plus: Examiner Comments

This answer receives 1 mark for easier to search, the second part of mark point 1.

"Securely keep them" is not enough for a second mark because paper records can be kept securely. The response does not extend the point about searching being easier.

Total: 1 Mark

In the paper-based system orders were taken by phone and recorded on order pads.

At the end of each day the manager reviewed the orders that had been placed and purchased new stock.

Explain **one** advantage **to the company** of changing from a paper-based system to an IT system.

(2)

An advantage to the company changing to an IT System is that the data can easily be accessed without the risk of it getting lost, thus enables the company to use it for future reference.

Results Plus: Examiner Comments

This answer receives marks for a sensible link between two points:

"ease of access" mark point 1

"not losing data" mark point 7

Total: 2 Marks

Q2.

This is a short practical question, about a flowchart

This is worth six marks.

The mark scheme contains eight items.

Candidates do not need to produce a fully complete diagram to get full marks. Any six of the eight marking points are sufficient.

This approach was taken as was felt that the candidates have a lot to do in a limited time and different candidates will have different strengths in analysing a problem and producing a flowchart.

The flowchart in the mark scheme drawn to illustrate all the marking points. It is not the only answer.

Q3.

This question asks for an explanation of why a dataflow diagram is useful in planning an information system.

This is worth three marks.

The mark scheme lists facts that could be part of a response. The examples give two possible ways of assembling those facts into a description. If a listed fact can be identified in the description, it should get a mark.

The examples are not a definitive list and other descriptions could get the marks, such as ' Due to the graphical nature of the DFD, it can be understood by both technical and non-technical people. It shows the boundaries of the system and how data moves between the system and outside entities.'

Q4.   No Examiner's Report available for this question

Q5.

This involved interpreting a flowchart and showed the expected distribution of marks from 0–6.

Q6.

This is a large practical about a dataflow diagram for the toll system.

This is worth twelve marks.

The mark scheme contains thirteen items and candidates do not need to produce a fully complete diagram to get full marks.

Appendix 7 of the specification shows the correct symbols to use in dataflow diagrams, but these were not repeated in the paper and alternative symbols were accepted as long as they were used consistently.

Processes were also interpreted fairly loosely, as long as the process could be recognised it did not have to be in a single box as shown in appendix 7.

Any layout configuration could be used, as long as the parts/processes could be identified.

Q7.   No Examiner's Report available for this question

Q8.   No Examiner's Report available for this question

Q9.

This is a large practical about a dataflow diagram for a bus company.

This is worth twelve marks.

The mark scheme contains thirteen items and candidates do not need to produce a fully complete diagram to get full marks.

Appendix 7 of the specification shows the correct symbols to use in dataflow diagrams, but these were not repeated in the paper and alternative symbols were accepted as long as they were used consistently.

Processes were also interpreted fairly loosely, as long as the process could be recognised it did not have to be in a single box as shown in appendix 7.

Any layout configuration could be used, as long as the parts/processes could be identified.

Q10.   No Examiner's Report available for this question

Q11.   No Examiner's Report available for this question

Q12.   No Examiner's Report available for this question

Q13.

(i) involved writing an SQL query and was not attempted by about half of the candidates. Those who did attempt the task usually picked up several marks.

(ii) should have produced a straightforward answer about the benefits of access to a specialised database in the context of the question. Large numbers of candidates ignored all context and answered in terms of benefits of using a database to store/search for information.

Q14.   No Examiner's Report available for this question
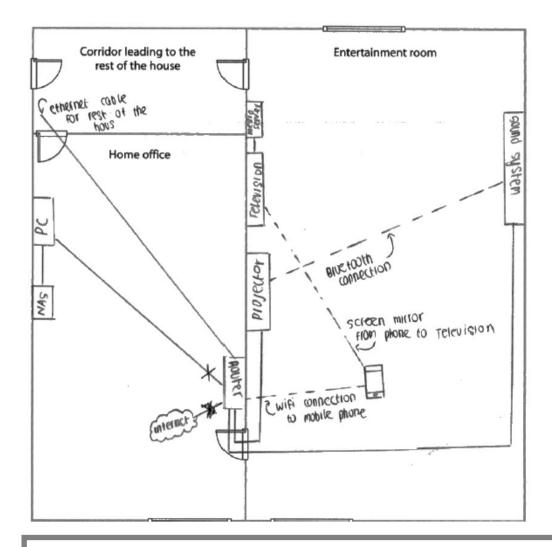
Q15.

(a) This was a large practical question. Candidates were asked to analyse a set of requirements for an extension to a home network. They then needed to draw a network diagram that met those requirements.

The specification does not include a standard set of network symbols, so candidates were told they may use a labelled box or symbol. Marks were **only** awarded for labelled items.

The question stated that connection media, Ethernet and wireless, must use solid and dotted lines respectively. Candidates could only obtain marks for other ways of showing connection media if they were clearly labelled and used consistently in their diagram.

Nearly everyone who attempted the diagram was able to gain some marks. Common weaknesses were in not showing the existing connections to the internet or the rest of the house.

Corridor leading to the rest of the house

Entertainment room

ethernet cable for rest of the hous

Home office

media server

television

sound system

PC

NAS

projector

Bluetooth connection

screen mirror from phone to Television

router

internet

wifi connection to mobile phone

Results Plus: Examiner Comments

The answer receives:

Mark points 1 and 2, Internet connection going to a router

Mark point 3, cable to the rest of the house

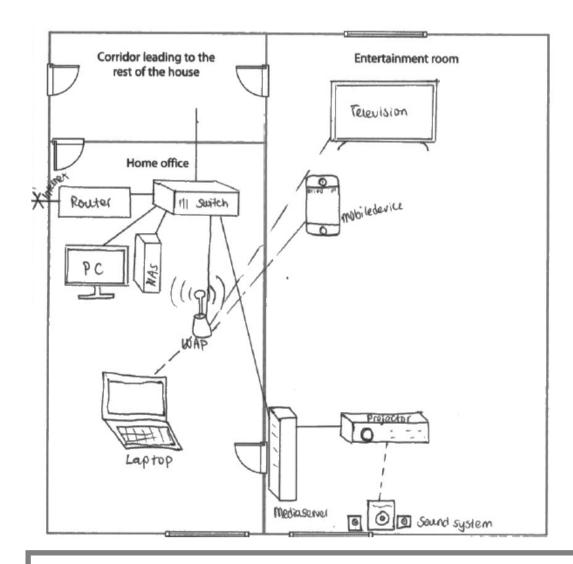Mark point 4, NAS and PC in office, with cable

Mark point 10, mobile device linked to TV

Mark point 11, projector linked to sound system

The diagram does not include a laptop, switch or WAP, so misses mark points 5 to 8.

The TV is not linked to the network by cable, so misses mark point 9.

Total: 6 Marks

Corridor leading to the rest of the house

Entertainment room

Television

Home office

Internet

Router

Switch

PC

NAS

mobile device

WAP

Laptop

Projector

Mediaserver

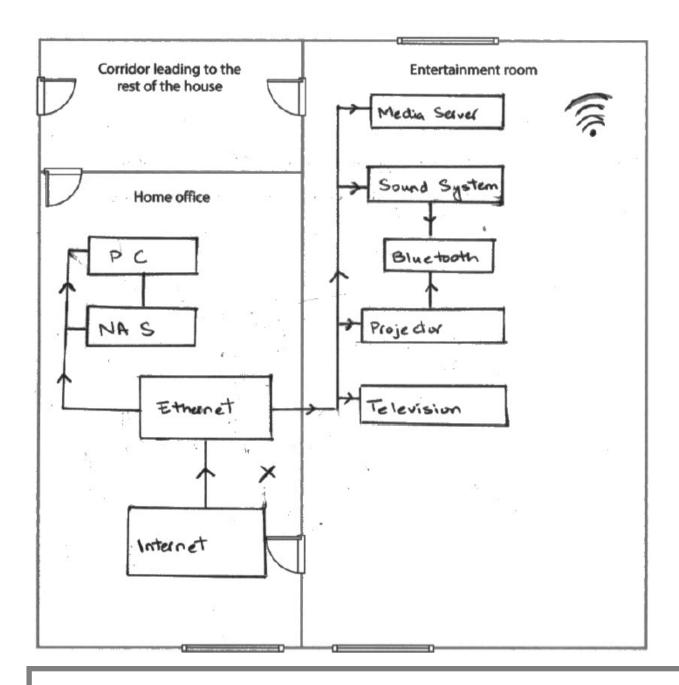Sound system

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Results Plus: Examiner Comments

The diagram only misses mark point 9, the TV is not linked by cable.

The short cable leading into the room top left is the minimum acceptable for mark point 3, cable to rest of house.

The candidate draws a number of 'realistic' symbols, eg the laptop and PC. These would not receive a mark if they were not labelled correctly.

Total: 10 Marks

Corridor leading to the rest of the house

Home office

Entertainment room

PC

NAS

Ethernet

Internet

Media Server

Sound System

Bluetooth

Projector

Television
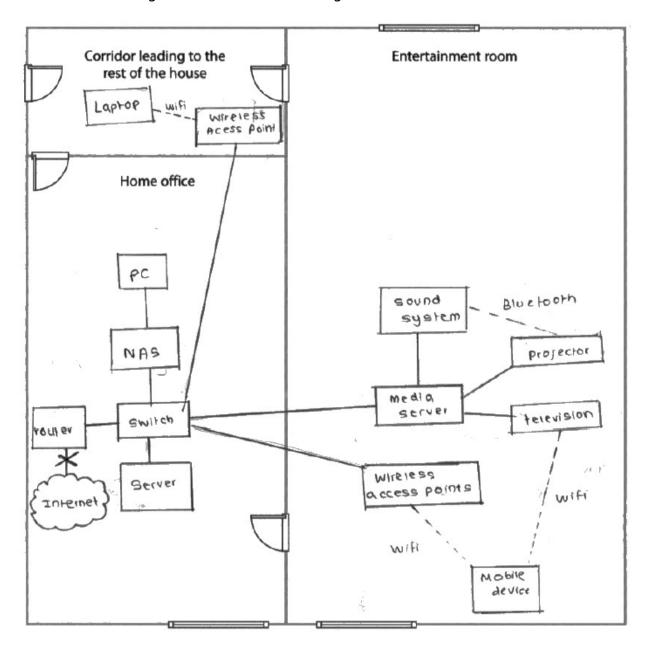
(b)(i) This question asked for the candidates to show where a hardware firewall could be added to the diagram. It was poorly-answered, with numerous candidates trying to put the hardware firewall inside an existing device instead of adding it to the network.

(b) Paula's network can be improved by adding a hardware firewall.

(i) Draw an X on your network diagram to show where the hardware firewall should be located.

(1)
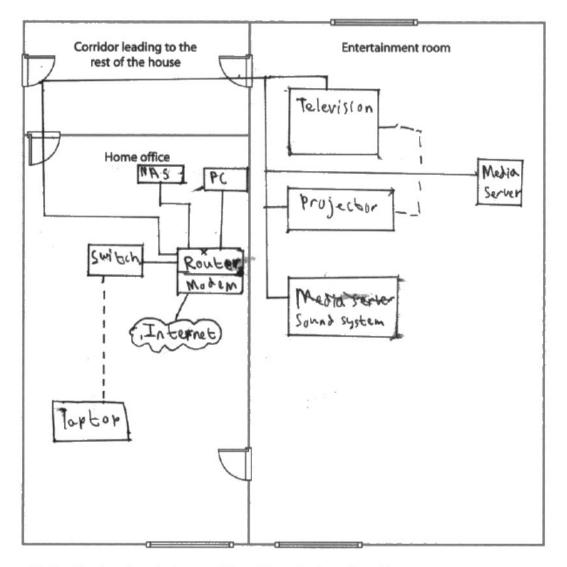
Results Plus: Examiner Comments

This is the correct answer, with the X between the internet and the router.

If the candidate had not had a router in their diagram, the X would have been acceptable between the internet and the first network device to which it connected.

Total: 1 Mark

Corridor leading to the rest of the house

Entertainment room

Television

Home office

NAS

PC

Media Server

Projector

Switch

Router Modem

Media server Sound system

Internet

Laptop

(b) Paula's network can be improved by adding a hardware firewall.

(i) Draw an X on your network diagram to show where the hardware firewall should be located.
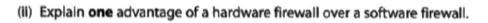
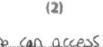(1)

Results Plus: Examiner Comments

Although the diagram shows the internet and the router, the candidate has put the hardware firewall inside the router instead of adding it bewteen the internet and the router.

Total: 0 Marks

(b)(ii) This question asked for an advantage of a hardware firewall over a software firewall. It was not answered well, with many candidates saying that hardware firewalls could only be attacked/hacked at their physical location instead of via the network/internet.

This is a zero mark answer

(ii) Explain **one** advantage of a hardware firewall over a software firewall.

(2)

Its a physical hadware so it can be trusted and no one can access it by hacking you need to be physically there to access it.

Results Plus: Examiner Comments

This answer illustrates the common, incorrect idea that a hardware firewall can only be hacked at the firewall's location.

This is a two mark answer.

(ii) Explain **one** advantage of a hardware firewall over a software firewall.

(2)

It prevents Unauthorized devices from connecting or entering the network while and protects all devices from malicious data while software only protects the device with the firewall installed.

Results Plus: Examiner Comments

This answer is mark point 2, protecting the whole network rather than just the device it is installed on.

Q16.

Many candidates either did not attempt it or appeared to stop after a brief try. Those who did try to complete the question often scored over half marks although none managed full marks.

Q17.   No Examiner's Report available for this question

Q18.   No Examiner's Report available for this question

Q19.

This was a practical question, requiring candidates to analyse a dataflow diagram and identify which pieces of data were being moved.

The mark scheme allows for meaningful alternatives to the items listed: one example is given for each but others could be acceptable.

Complete the table by stating what data is moving for the labels A to F.

The first one is done for you.

(6)

Label	Data
A	Order
B	Processed order
C	stock removed
D	reports
E	orders of the day
F	new stock order
G	Purchase order

Results Plus: Examiner Comments

The answer receives full marks. Note that there are several meaningful alternatives allowed here.

B, "processed order", the word 'processed' is ignored because the whole diagram is about processing the order.

C "stock removed" is acceptable as 'stock used'.

D "reports" is acceptable because it implies more than one, ie stock and order reports. 'Report', singular, would not be allowed.

E "orders of the day" is acceptable as meaning 'daily orders'.

F "new stock order" is acceptable as 'stock required'.

Total: 6 Marks

Complete the table by stating what data is moving for the labels A to F.

The first one is done for you.

(6)

Label	Data
A	Order
B	Order
C	Type of flower
D	reports
E	order
F	~~Purchase order~~ Stock required
G	~~Stock required~~. Purchase order

Complete the table by stating what data is moving for the labels A to F.

The first one is done for you.

(6)

Label	Data
A	Order
B	~~display~~ Daily order
C	updating
D	~~Rolling~~ report
E	Daily orders
F	~~Receive~~ Stock order
G	Stock

Results Plus: Examiner Comments

In this answer, E and F are correct.

B, "daily order" is not allowed because there will be more than one order per day and 'daily order' will be part of E.

D, "report" needs to be plural to receive a mark.

Total: 2 Marks