Unit 1: Information technology systems

# Test 1: 25 September 2017

The exam has 20 marks. You should take 27 minutes to complete it.

Name: Will Watson

Moderator’s name: George Kontos

Moderator’s mark:

1) Grangeholme College is based on a large campus with access to a local area network in all areas. There are several dedicated computer rooms equipped with personal computers that have a wired connection to the network server. The network server is located in a dedicated server room with secure access. The network is used by IT technicians, administrative staff, teaching staff and students.

Entry to the server room is controlled by an ID card system. The college would like to introduce a more secure access system. It is considering installing a biometric fingerprint scanning system, rather than an ID card system. Explain two advantages of introducing a biometric access system rather than an ID card system.

Advantage 1 (2 marks)

Using a biometric fingerprint scanning system is more convenient than using an ID scanner

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to access the room but with the finger print scanner, you can just touch your finger or thumb

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onto the touchpad and you can gain access to the room.

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Advantage 2 (2 marks)

If someone steals your ID card then they can access the rooms which the ID card is needed.

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With the fingerprint scanner, you don’t need a card to gain access so no one other than those

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with a registered fingerprint can get into the room which makes it more secure.

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2)Rahim is an animator who works for a company based in a large city-centre office with branches around the country. Rahim travels around the country to meet clients and colleagues. He usually travels by train to work and other locations, and needs to be able to use this time to work and contact clients. During meetings, Rahim needs to present his work to others. He must be able to access and work on the same files when travelling, when in the office or with clients.

His animation work involves capturing, storing and manipulating large, high-quality image and animation files. He must be able to export these into different file formats for inclusion in his work and for sharing with others.

**(a)** Rahim wants a portable storage system to use and share his image and animation files.

Rahim is considering storing his files on DVDs. One implication of using portable storage systems is that due to their size, they can easily be lost or stolen during travel. Explain two other implications of Rahim using DVDs for this purpose.

Implication 1 (3 marks)

One implication could be that DVD cases are quite cheap as the world has moved towards

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Hard Disk Drives and Solid State Drives so it would be easy to carry round the DVDs if

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Rahim purchased a bag with a strap so the DVDs are safely secured around his body. He

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could also buy a case that would fit into a backpack so no one can see that he has possession

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of DVDs while getting the train or other methods of transport he may use.

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Implication 2 (3 marks)

Another implication could be that disks are easily scratched even when inserting the disk

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into a disk drive so it would be very easy for Rahim to lose all of his work if he doesn’t have

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Backups on his computer. Disks are also quite fragile, if placed into a bag with lots of other

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items inside then there is a high chance of the disk snapping into pieces which would also

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make him lose all his work if he didn’t have backups on his PC.

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**(b)** Produce a solution showing how Rahim could combine IT systems to meet all his needs, including the devices and systems to be used.

4 marks

Rahim should either use a Hard Disk Drive that he should carry around in a protective case

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Inside a bag or send the animation over the web, whether that be by email or privately

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uploading it to sites like MEGAshare or MediaFire. An advantage to sending it over the

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internet is that there is nothing to carry that you may lose while an advantage of using a

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HDD is that it is usually small enough to not be noticed if in your pocket or won’t be seen at

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all in a bag. A disadvantage of sending it online is if anyone hacks the account where the

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work was uploaded then they have access to it and a disadvantage to using a HDD is if it

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gets stolen, or the bag it was in gets stolen, then you won’t be able to get it back.

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3) a) Tablet devices use solid state drives (SSD) rather than traditional hard disk drives (HDD).

Assess how the features of solid state drives (SSD) make them suitable for use in tablet devices.

3 marks

Solid State Drives are smaller than Hard Disk Drives so the tablet doesn’t need to be overwhelmingly

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massive.

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b) Josie is considering buying a laptop with an HDD to complete her graphics assignments.

Explain why Josie may prefer to buy a laptop with an HDD rather than an SSD.

3 marks

HDDs can usually store more data than a SSD so she would be able to store better graphic work.

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