



Stanmore Secondary School
Department of Mathematics & Information Technology
First Controlled Test 2021

GRADE 12 - INFORMATION TECHNOLOGY

Time: $1\frac{1}{2}$ Hour

Examiner: Mr S. Naidoo

Max Marks: 60

Moderator: Mr AF Gabriel (Woodview Sec)

Instructions

1. Answer all questions.
 2. Only answers written in ink will be marked.
 3. Write neatly and legibly.
 4. This question paper consists of **SIX** questions in **FIVE** pages.
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Question One

Various answers are provided as possible answers to the following questions.

Choose the answer and write down the letter (A - D) next to the question number (1.1 - 1.5) in the answer book, e.g. 1.6 E

1.1 Convergence is ...

- A. Multiple devices running the exact same software
- B. Multiple devices having the same hardware failure
- C. Multiple devices technology and functions combines into one single device
- D. Multiple devices manufactured with defective hardware

1.2 _____ is a convergence device.

- A. Laptop
- B. Netbook
- C. Smartphone
- D. E-Reader

1.3 _____ uses a limited amount of faster media to speed up access to data and instructions stored on slower media.

- A. Core
- B. BUS
- C. RAM
- D. Cache

1.4 _____ means you have the right to the latest, most up to date version of the program for a payable monthly subscription.

- A. Windows Update
- B. SaaS
- C. Torrent
- D. Open Source

1.5 _____ software creates a secure, encrypted connection between your computer and the target network.

- A. Torrent
- B. Google Doc
- C. VPN
- D. Remote access

1.6 Which one of these hardware devices does not influence the performance of a computer

- A. Power supply
- B. CPU
- C. Memory
- D. Cache

1.7 How many times will the following loop be executed?

$A \leftarrow 5$

Repeat

....

$A \leftarrow \text{Power}(A, 0) - 2$

Until $A \leq 0$

- A. Five Times
- B. Never
- C. One time
- D. Infinite times

[7]

Question Two

Scenario

Mobile technologies are developing at a breakneck speed and it more exciting and capable devices will be available almost every month.

- 2.1 List 2 advantages of laptops as mobile technology. (2)
- 2.2 List 2 disadvantages of smart phones as mobile technology. (2)
- 2.3 List 2 differences between a laptop and a tablet. (2)
- 2.4 Differentiate between "Always On" and "Always Connected". (2)
- 2.5 "More powerful device = greater need for electricity"
- Explain this concept with regard to mobile technology's battery life and battery use. (2)

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Question Three

Scenario

Some computers are faster than others. Most adverts flood us with technical specifications that are meant to give us a sense of how fast and powerful the machine is.

- 3.1 Explain the concept of a 4 core CPU. (1)
- 3.2 What is the most cheapest and most simplest way to improve performance? (1)
- 3.3 Explain how BUS speed can influence performance. (1)
- 3.4 A computer was purchased for home use. List 3 tasks that this computer can be used for. (3)
- 3.5 What does the abbreviation SOHO mean? (1)
- 3.6 List 3 tasks that a SOHO computer can be used for. (2)
- 3.7 Which is the cheapest and simplest way to improve the performance of a computer? (1)
- 3.8 A friend bought an entry level computer with a 160GB H.D.D. with an integrated graphics controller. She wants to record wedding videos and edit them on this computer to earn money.
- 3.8.1 Why would it have been a good idea for her to check if the computer had a Firewire port? (1)
- 3.8.2 Explain why a small H.D.D. will pose a problem in terms of editing videos? (2)
- 3.8.3 Explain what is meant by integrated graphics controller. (1)
- 3.8.4 Would this integrated graphics controller be adequate for video editing? Briefly motivate your answer. (2)

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Question Four

Scenario

The S.G.B. purchased a laptop for the librarian. The S.G.B. has to now decide on the software.

The school principal has heard of cloud computing and SaaS (Software as a service). He asks the ICT department for clarity on these two aspects. Briefly explain by providing answers the following questions

- 4.1 What does it mean to store data 'in the cloud'? (2)
- 4.2 Cloud computing includes applications such as 'Google Docs'. Briefly explain how cloud applications work in general. (2)
- 4.3 Briefly differentiate between SaaS and the more traditional (older) software licensing models. (2)
- 4.4 Briefly discuss the ways in which cloud computing may affect connectivity needs of the library. (2)

[8]

Question Five

Scenario

Security

We want to feel that our data is safe. We don't want other people to be able to steal or destroy our work, our identity or our money.

- 5.1 List two tips/good practices when using an anti-virus software. (2)
- 5.2 Explain what a firewall is? (1)
- 5.3 Why do you need a firewall although you have installed an anti-virus software? (1)
- 5.4 One of the best tools in computer security is common-sense.
List 2 ways in which you can check if an email is a scam or not. (2)
- 5.5 List THREE good password policy. (3)
- 5.6 List THREE points that must be followed for performing back-up. (3)

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Question Six

Study the MS Access table below and answer the question that follows

MoviesTb : Table			
	Field Name	Data Type	Description
	Title	Text	The title of the movie
	Director	Text	The name of the director
	Year	Date/Time	The year the movie was released
	Length	Number	Running time of the movie
	Producer1	Text	Name of producer
	Producer2	Text	Name of producer
	Producer3	Text	Name of producer
	Actor1	Text	Name of male star
	Actor2	Text	Name of male star
	Actor3	Text	Name of male star
	Actress1	Text	Name of female star
	Actress2	Text	Name of female star
	Actress3	Text	Name of female star
	Genre	Text	The type of movie (Action, Romance, Drama, Sci-Fi, ect)
	Age Restriction	Text	Age restriction of the movie
	Price	Currency	The cost of the movie
	Rating	Number	Rating of the movie out of 10
	ID	AutoNumber	An automatically generated field

6.1 Explain the concept primary key. (2)

6.2 Write down the primary key for the above table. (1)

6.3 What data type would you use for field "CellNumber" in the MS Access? Explain. (3)

[6]

