**November Examinations 2012**

**INFORMATION TECHNOLOGY**

**GRADE 10 : PAPER 2**

**Suggested Answers**

**SECTION A**

**Question 1**

* 1. D
  2. C
  3. B
  4. C
  5. B
  6. B
  7. B
  8. A
  9. B/D
  10. C [ 10 ]

**Question 2**

2.1 E

2.2 G

2.3 A

2.4 H

2.5 I

2.6 J

2.7 B

2.8 C

2.9 D

2.10 F [10]

**QUESTION 3**

3.1. TRUE

3.2 FALSE

3.3 FALSE

3.4 TRUE

3.5 TRUE [ 5 X 2]

**SECTION B: HARDWARE /SOFTWARE**

**Question 4**

4.1. 2.5 Ghz

4.2. 2048 MB

4.3. 320 Gb

4.4. Can be used for virtual memory therefore can increase efficiency.

4.5. CD, DVD, flash, external hard drives

4.6 1. Universal serial Bus

4.6.2. Firewire port

4.7.1. A driver a device driver or software driver is a computer program allowing higher-

level computer programs to interact with a hardware device.

4.7.2. Mouse, keyboard, any other device with USB connection

4.8. Reduced heat

Lower power consumption

Easier on the eyes

More compact, less bulky or smaller

Quality of the display is much bett er or better resolution (ANY 3)

Easily accessible, support provided. Less flickering required.

4.9.1. Used for storage

4.9.2. Fetches an instruction from memory: Instruction/data fetched from cache/RAM

Decoding the instruction: Instruction decoded into data address

Executing the instruction: Instructions are executed

Data Transfer: Data is transferred to registers

4.9.3. Intel, AMD, IBM

4.9.4. Dual core – has 2 CPU’s therefore faster processing capacity

Core 2 duo - 4 CPU’s

4.10.1. RAM is primary memory used for temporary storage of data.

4.10.2. RAM stores data that user is using – ROM has data stored at the time of

manufacture.

RAM is volatile so contents is lost when power is switched off. ROM is non-volatile

4.11. Refresh rate is the number of times per second the screen refreshes whereas

resolution is the number of dots(pixels) per inch.

4.12. Expensive, can be slower than a laser print

4.13.1. MsWorks

4.13.2. Windows Vista

**SECTION C: E-Communication**

**QUESTION FIVE**

5.1. A network is a group of computers or computing devices that are connected by some

kind of communications medium.

5.2. ***Local area network:*** connects computers in a small area such as a school, building

or company.

***Wide area network***: is a network that connects computers in a large are such as a

city/country/even the world.

5.3. Banking - can do transfers/payments from comfort of his home

On-line shopping - has access to the international market

Communication – advertising, sending e-mail, etc.

5.4.1. VoIP- Voice over internet protocol> using an internet to make phone calls

5.4.2. e-mail - electronic mail > occurs almost immediately, no longer have to wait weeks

for a reply.

5.4.3. Blog- personal websites, can be personal diaries/newletters/columns

5.4.4. Fax-to-email - Ability to send a fax to someones e-mail address using your computer

and the internet.

5.5.1. Internet Service Provider

5.5.2. Monthly fee affordable

Host a website at no additional cost

Good reputation, is the connection reliable

Provides protection against viruses and spam

5.5.3. Search engine- used to find information on topics by using keywords.

eg . Google.com

5.6. outlook/ gmail/yahoo/outlook express/internet explorer

5.7. A tweet is restricted to 140 characters. Size of e-mail not restricted.

A tweet is public by default whereas an e-mail is sent to a specific user.

A tweet cannot have an attachment.

5.8. Allows you to display maps, listen to music-portable media player, receives and

sends e-mail

GPS capabilities, touch screen, has more memory, allows for internet access, has a

more powerful advanced operating system.

5.9. Refers to virtual communities that communicate over the internet.

5.10. Learners don’t learn social skills, internet bullying, identity theft, distribution of

pornography

**SOCIAL AND ETHICAL ISSUES**

**QUESTION 6**

6.1. Nettiquette is a set of rules or conventions when sending an email.

6.2. Spam – set a spam filter ( anti spam software)

Viruses , anti-virus software

Identity theft – install anti-spyware

6.3. The science of incorporating comfort, efficiency and safety into the design in relation to

the human body.

6.4. Dont use your own name/ or the name of a family member

Use mixed case letters

Do not use passwords of all digits

Longer than 10 letters

Vary uppercase, numeric and punctuation

**SECTION D: DATA REPRESENTATION**

**QUESTION 7**

7.1. Binary

7.2.1. 110 11112

= 1+ 2 + 4 + 8 + 32 + 64

= 11110

7.2.2. 146610 = 1011010011102

|  |  |  |
| --- | --- | --- |
| 2 | 1446 |  |
| 2 | 723 | 0 |
| 2 | 361 | 1 |
| 2 | 180 | 1 |
| 2 | 90 | 0 |
| 2 | 45 | 0 |
| 2 | 22 | 1 |
| 2 | 11 | 0 |
| 2 | 5 | 1 |
| 2 | 2 | 1 |
| 2 | 1 | 0 |
| 2 | 0 | 1 |

7.2.3. A56216 = (2\* 160) + (6\*161) + (5\*162) (10 \* 163)

= 2 + 96 + 1280 + 40960 + 4233810

**SECTION E: PROGRAMMING AND SOFTWARE DEVELOPMENT**

**Question 8**

8.1. Input   
 Output   
 Definiteness   
 Effectiveness   
 Termination

8.2. ***LoopIndex*** is not initialised before the loop and it is not incremented

inside the loop.

The statement (If LoopIndex <= 2)

should read as follows:

If FactorCount <= 2

8.3. Algorithm Marks

Set counter 🡨 1

Set CountDistinction 🡨 0

Repeat unit counter = 5

StartRepeat

Enter mark (mark)

Percent 🡨 mark/60 \* 100

If Percent >= 80

CountDistinction 🡨 CountDistinction + 1

EndRepeat

Learners 🡨 CountDistinction / 5 \* 100

Display The percentage of learners that received distinctions is Leaners

End Algorithm