Study Opportunities

June 2013

COMPUTER APPLICATIONS TECHNOLOGY
Grade 11
Paper 2 – Written question paper
Memorandum

Time: 2.5 hours   *Total: 125*

This memorandum consists of 8 pages (including the front page)

SECTION A

Question 1

1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10
C	A	D	C	B	D	D	B	D	C
✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

[10]

[10]

Question 2

2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10
E	P	B	C	M	A	I	K	N	O
GPS	UPS	DIMM	DPI	RFID	3G	MP	OCR	ROM	RSI
✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

[10]

[10]

SECTION B

Question 3

3.1   Biometrics refers to technology that measures/scans something biologically unique to each person for identification purposes. ✔
In this way, only the authorised user of the flash disk would be able to use it. ✔ (2)

3.2.1 Any ONE of: ✔
- Detecting motion
- Vital signs of patients e.g. blood pressure, pulse etc.
- Monitoring/measuring weather data e.g. temperature, humidity, air pressure etc.
- Meter readers e.g. water/electricity consumption
- Monitoring 'system' readings such as pressure, radioactivity levels etc. (1)

3.2.2 Any ONE of: ✔
- Can be used in situations that are difficult/hazardous for humans
- Automatically captured, without human interaction.
- Captured immediately/faster than human input
- No chance of human error in data capture i.e. accurate etc. (1)

3.3   It can be easily 'identified' or guessed. ✔

It only contains numbers and not a mixture of numbers/letters and special characters. ✔
(Do not accept 'too short/too few digits' as an answer). (2)

3.4   Any TWO of: ✔✔
- Cable locks / lockable cabinets
- Restricting physical access
- Using tracking devices / motion sensors etc. (2)

3.5 Any TWO of: ✔✔
- Improved accuracy
- Quicker to process (scan or capture data) goods/items
- Easy to update/change prices
- Easy to track stock levels (if linked to a stock system) etc. (2)

3.6 Any TWO of: ✔✔
- Provides more space (no keyboard)
- Ideal for restaurants/fast-food outlets with a standard/fixed set of options
- Users have a feeling of 'intimacy/immediacy' interacting with device/data
- Intuitive to use
- Can use hand gestures e.g. 'swiping' etc. (2)

3.7 Any TWO of: ✔✔
- Zoom (optical/digital)
- Sensor size
- ISO rating
- Type/size of storage media provided
- Ways of connecting to a computer (2)

(Do not accept issues concerning the brand name, cost, warranty issues and the resolution).

[14]

Question 4

4.1.1 Memory holds the programs and data that are being processed. ✔
Storage keeps data and programs permanently (even when the power is switched off). ✔ (2)

4.1.2 Any TWO of: ✔✔
- Memory is faster than storage
- Memory is more expensive than storage (per unit)
- Memory is volatile / needs power to retain its contents

(Do not accept any answer relating to the difference in function between them.) (2)

4.2.1 A driver is software ✔ that is used to control a specific hardware device. ✔ (2)

4.2.2 No ✔
Although most devices are automatically detected and the drivers are automatically installed, you still need the drivers.
(Do not award mark for 'No' if no motivation is given.) ✔ (2)

4.3 Any TWO of: ✔✔
- Emptying Recycle Bin
- Removing temporary files from Internet
- Removing temporary files created by operating system / Windows
- Uninstalling components of the operating system not needed
- Uninstalling programs you never use (2)

3

4.4.1 Disk fragmentation is a process that occurs whereby different parts of the files can become scattered across the disk. ✔
This can cause the computer to become slower in retrieving the files in order to open or save them. ✔ (2)

4.4.2 The 'scattered' parts of files on disk are rearranged and consolidated so that they can be retrieved more quickly. ✔
The same 'volume' of data is still being stored on disk so no 'more disk space' is being made available. ✔ (2)

4.5 Any TWO of: ✔✔
- Resolution
- Contrast ratio
- Aspect ratio
- Response time
- Type of port to connect to (DMI and HDMI)
- Viewing angle
- Adjustments for height
- Built-in USB ports

(Do not accept size or any non-hardware issue such as cost.) (2)

4.6 Any TWO of: ✔✔
- Connect all components for communication/data transfer
- Provides adaptors/ports to plug external devices into computer
- Distributes power to devices from the power supply
- Provides slots for adding additional controllers/hardware e.g. memory etc. (2)

4.7 Any TWO of: ✔✔
- Easy to use/plugs into a USB port
- Highly portable
- Newer external hard drives have large capacities
- Can store backup (drive) off-site for safety etc. (2)

4.8 Backing up files means making a duplicate copy of the files (on external storage). ✔
Archiving files means removing /cutting seldom used files, or files that won't be changed, from the computer and writing them to external storage. ✔ (2)

[22]

Question 5

5.1.1 A LAN is a network connecting computers in a small area such as a school, university campus or company offices in one building. ✓ (1)

5.1.2 ONE OF: ✓ Scanner, printer, smartphone, consumer tablet. (2)

5.1.3 Any TWO of: ✓✓
- Ability to use hardware not directly connected to user's computer
- Presence of extra/logical drives e.g. S, T, U, Z etc.
- Presence of other computers in 'Network Neighbourhood/Places' folder
- Network activity indicator in system tray etc. (2)

5.2 UTP: ONE advantage ✓
    Cheap to install / Easy to install
Fiber optic: ONE advantage ✓
    Fast data transfer
    Not affected by electrical signals (2)

5.3 Wireless/WiFi capability ✓ (1)

5.4 A server is a computer that provides shared resources to network users/clients. ✓
Any ONE example: ✓
- File server, e-mail server, Internet/proxy server, printer server ✓ (2)

5.5 It is an organisation's private network ✓ which is an Internet-like environment consisting of web pages. ✓
Any ONE use for a <u>school</u>: ✓
- Posting past exam papers and tests/study material
- Posting administrative/policy documents
- Posting of internal announcements etc. (3)

5.6.1 An AUP is a policy document that outlines the rights/privileges/responsibilities of a user in terms of the usage of computer facilities. ✓ (1)

5.6.2 Any TWO of: ✓✓
- Privacy issues
- Ethical/safe use of facilities
- Restrictions on volume and type of downloads/material from the Internet
- Policy on use of portable storage devices
- Policy/restrictions in terms of installing software/hardware
- Procedures to follow in terms of online dangers and malware
- Consequences of violations of terms of AUP etc. (2)

5.7.1 Spyware ✓
(Also accept malware) (1)

5.7.2 A keylogger is software that tracks and records keystrokes as you type ✓
to find out what your usernames, passwords and PINs are. ✓ (2)

5.8 Any TWO of: ✓✓
- Hyperlinks are easy to locate/consistently placed on web pages
- Links are concise / easy to understand
- Links formatted consistently
- No broken links (2)

5.9 A: Two questions in one <u>or</u> vague in terms of the term a lot' ✓
B: Question is too open-ended ✓ (2)

[23]

Question 6

6.1.1 A primary key is a field that has unique/different value in that field for every record. / A field that uniquely identifies a record. ✓

The *CellNo* field is the only field that can serve as a primary key. ✓

(*Do not accept Email field as a primary key as some entries are blank.*). (2)

6.1.2 Criteria for *Grade* field should be <u>11 or 12</u> ✓ *(accept >=11)*
Criteria for *WhatsApp* field should 'move 1 line up'
(accept description where all criteria are repeated) ✓
No sorting is specified. ✓
The Surname and Name fields need to have their 'Show' properties selected/ticked. ✓ (4)

6.2 Add section breaks before and after the page ✓
and change the page orientation of that section to landscape. ✓

(Also accept highlighting text and applying landscape format to selected text.) (2)

6.3.1 A text editor. ✓
(Accept specific examples such as WordPad or Notepad). (1)

6.3.2 All formatting would be lost. ✓ (1)

6.3.3 Any ONE of: ✓
- It is easier to maintain consistency in terms of formatting.
- It saves time as a number of formatting actions or options can be applied in one go.
- It is easy to effect changes to styles globally throughout the document, etc. (1)

[11]

Question 7: Integrated Scenario

7.1.1 CPU / Processor ✓
Chips that are 'Dual Core' have 2 processors ✓ (2)

7.1.2 4 GB ✔✔
(Award one mark if 4096 used.) (2)

7.1.3 15.6" ✔ (HD LED)
Small screen is indicative of a portable computer. ✔ (2)

7.2 Any THREE of: ✔✔✔
- Speed
- Resolution
- Monthly Duty Cycle
- Number of colours
- Paper options etc.
(Do not accept cost, brand names and warrantees.) (3)

7.3 PDF is a type of file format. ✔
Any ONE benefit: ✔
- Do not require the program in which the document was created to read it.
- User cannot generally change the document.
- Usually create smaller file sizes than original file. (2)

7.4 Any TWO of: ✔✔
- Eye tracking devices
- Head movement devices
- Large key (outsize) keyboards
- Large trackballs
- Joysticks
- Foot pedal control devices
- Sip and puff devices (2)

7.5.1 Any TWO of: ✔✔ (2)
- Hardware such as printers can be shared – cost saving
- Software can be shared
- Files are stored on a central computer (file server) allowing users access from any computer in the network.
- Files can be transferred very easily without the use of devices such as portable hard drives.
- Easier to maintain security.
- A single Internet connection can be shared by all users, etc.

7.5.2 A NIC is a controller/card ✔
used to connect the computer to the network /
controls the communication between the computer and the network. ✔

A switch is a network device used to connect computers to a central point ✔ so that communication can occur. ✔ (4)

7.5.3 Any TWO of: ✔✔
- Security can be compromised if the WLAN is not configured correctly
- Signal could get lost or interfered with due to electronic or electrical interference
- Performance can decrease as the number of computers connected increases.

- Extra cost of wireless NICs and wireless access points
- Require more expertise to set up, etc. (2)

7.6.1 Now it prevents sorting/filtering on surname. ✓ (1)

7.6.2 Monthly Salary values have been **formatted** to zero decimals / The cents are not displayed but stored in the cell and used by *Excel* when calculating the total ✓

Rather use the Round function to round the Monthly Salary values if you only want to work with whole numbers . ✓ (2)

7.6.3 Those with a monthly salary of less than R 5000 pay no tax. ✓
The others pay tax of R 1000 ✓ plus a percentage of ✓ the amount they earn over R 5000 ✓ (4)

7.6.4 Absolute addressing is used to prevent cell references changing ✓ when a formula is copied to other cells. ✓

In this case the C4 cell reference needs to be made absolute ✓ (D$1 or D1). (3)

7.7.1 Any TWO of: ✓✓
- Saves space on local computer
- Backups are stored safely off-site
- Can access files/data wherever you have Internet access
- Certain amount of storage is provided for free (2)

7.7.2 Any TWO of: ✓✓
- Need Internet access
- Pay for storage and You pay for the data storage and the bandwidth (costs) used to upload and download the data.
- Privacy/security concerns
- Concerns if company goes out of business etc. (2)

[35]

TOTAL : 125