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

<table>
<thead>
<tr>
<th>1.1</th>
<th>1.2</th>
<th>1.3</th>
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Question 2

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GPS  UPS  DIMM  DPI  RFID  3G  MP  OCR  ROM  RSI |
✓    ✓    ✓    ✓    ✓    ✓    ✓    ✓    ✓    ✓

[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 (Do not accept issues concerning the brand name, cost, warranty issues and the resolution) (2)

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)
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. ✓

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. ✓

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.)*

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.

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.

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. ✓
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. ☑

5.1.2 ONE OF: ☑ Scanner, printer, smartphone, consumer tablet.

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.

5.2 UTP: ONE advantage ☑
- Cheap to install / Easy to install
Fiber optic: ONE advantage ☑
- Fast data transfer
- Not affected by electrical signals

5.3 Wireless/WiFi capability ☑

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 ☑

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

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. ☑

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.

5.7.1 Spyware ☑
(Also accept malware)
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. ✓

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

5.9 A: Two questions in one or vague in terms of the term a lot’ ✓
B: Question is too open-ended ✓

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.).

6.1.2 Criteria for Grade field should be 11 or 12 ✓ (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.

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.)

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

6.3.2 All formatting would be lost. ✓

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.

Question 7: Integrated Scenario

7.1.1 CPU / Processor ✓
Chips that are ‘Dual Core’ have 2 processors ✓
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 warranties.) (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.

7.6.1 Now it prevents sorting/filtering on surname. ✓

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 . ✓

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 ✓

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 $D$1).

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

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.

[35]

**TOTAL : 125**