

*Examination papers and memoranda can sometimes 'date' with time, especially in a dynamic subject such as CAT. In some cases additional options or answers may now be applicable, while others may no longer be applicable.*

## **Study Opportunities**

**June 2013**

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

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*Time: 2.5 hours*

*Total: 125*

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

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## 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
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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### 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
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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## 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).*

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#### 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. ✓ (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)

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## 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 school: ✓
- 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 or vague in terms of the term a lot' ✓  
B: Question is too open-ended ✓ (2)

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## 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 11 or 12 ✓ (accept  $\geq 11$ )  
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)

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## 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 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. (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 \$D\$1). (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**