

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 2014

COMPUTER APPLICATIONS TECHNOLOGY

Grade 12

Paper 2 – Written

MEMORANDUM

TIME: 3 HOURS

MARKS: 150

This memorandum consists of 10 pages (cover page included)

Question 1: Multiple Choice

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

[10]

Question 2: Modified True or False

- 2.1 True ✓ (1)
- 2.2 False ✓ OCR ✓ (2)
- 2.3 False ✓ unshaped ✓ (2)

[5]

Question 3: Matching Items

3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10
D	H	L	A	C	O	M	P	J	E
SSD	RFID	GUI	CAD	ISO	FTP	CTS	DDoS	CMYK	LTE
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

[10]

Question 4: Systems Technologies

- 4.1.1 Any TWO of: ✓✓ (2)
- serves function of both keyboard and mouse (i.e. fewer peripherals to worry about)
 - allows more natural input (for drawing and gestures)
 - more intuitive to use and needs very little training
 - more space available for the display and for using the device
- 4.1.2 Any TWO of: ✓✓ (2)
- batteries may need to be replaced – check / replace
 - keyboard itself faulty – swop with known good one
 - USB dongle / adapter malfunction – try different port / reboot PC
 - Un-pair and re-pair the device – uninstall then reinstall
- 4.2.1 Any ONE of: ✓ (1)
- inkjet printer too slow
 - higher ink cost per page
 - can only produce one page at a time (i.e. unlike dot matrix – accept as valid reason)
[Do not accept “colour not needed”]
- 4.2.2 Any ONE of: ✓ (1)
- Laser printer
 - Any impact type printer – dot matrix, line printer or daisy wheel printer

- 4.3 With use (saving, deleting, copying, etc.), parts of the same file become 'scattered' across the disk, i.e. stored in different areas of the disk ✓
 Defragmentation only puts the file pieces back together, without 'squeezing' them into a smaller space or making more space available. ✓ (2)
- 4.4.1 Resolution ✓ (1)
- 4.4.2 Secondary memory (storage) is used for holding all programs and data, irrespective of whether they are currently being used or not – therefore a lot of space needed. ✓
 Primary memory (RAM) is used for holding only those programs and data currently being used while computer is switched on – therefore much less space needed. ✓ (2)
- 4.4.3 Any ONE of: ✓
 • more secure (no 'eavesdropping')
 • can be faster
 • can transfer over a greater distance (1)
- 4.4.4 No, because DVD drive is not 'forwards compatible' ✓
 [Must also supply correct reason] (1)
- 4.4.5 VGA and HDMI out are graphics ports (to connect to a monitor or data projector) ✓ (1)
- 4.4.6 Any TWO of: ✓✓
 • screen size 15.6" (not a standard desktop computer monitor size)
 • Bluetooth (standard with many portables, not with desktop computers)
 • Touchpad (input device associated with portable computers)
 • Wireless LAN (2)
- 4.4.7 Hardware component with incorrect specification: CPU (Intel Core i3) ✓
 Speed should be specified in Gigahertz: Intel Core i3 2.3 GHz ✓ (2)
- 4.5.1 Any TWO of: ✓✓
 • Minimum hard drive space needed
 • Minimum amount of RAM
 • Minimum CPU type / speed (2)
- 4.5.2 Because processing and storage of cloud-based software takes place on Internet servers, not on your local computer. So you do not need to worry about things like CPU speed and hard drive space needed to run and store the program. ✓ (1)
- 4.5.3 Because applications in the 'higher' version of the suite (latest version) will be able to load and read documents / files that were created in previous, i.e. 'lower' versions of the suite.
 [Read answer carefully – must give correct order.] ✓ (1)
- 4.6.1 Software 'bug' is a 'mistake' or error introduced inadvertently (not on purpose) when the software was being created. (It is NOT a virus.) ✓ (1)
- 4.6.2 Patch: update to fix a specific 'bug' in software (usually security related) ✓
Service pack: release of all 'bug' fixes AND new features since release of the original software; usually released by companies at fixed intervals, and larger than patches. ✓ (2)

[25]

Question 5

- 5.1.1 High-speed, high-bandwidth connection to the Internet ✓ (1)
- 5.1.2 Main reason: It allows your mobile devices to use the faster and cheaper ADSL Internet connection already provided, i.e. a mobile Internet 'network' via a fixed line connection. ✓
Potential danger: Any ONE of: ✓
- If you don't protect your connection with a password, neighbours may 'piggy-back' your connection, i.e. steal / use your 'cap'
 - Data, information, personal codes etc. on your home network may be at risk for the same reason. (2)
- 5.1.3 ADSL modem /router ✓ (1)
- 5.1.4 Higher speed (1024 kbps) is the 'download' speed (since most surfing or Internet activity involves downloads) ✓
Lower speed (512 kbps) is the 'upload' speed (less data is generally uploaded, e.g. blog postings, updating Facebook profiles) ✓ (2)
- 5.1.5 CAP: maximum amount of data that can be downloaded and uploaded (i.e. total Internet 'traffic') in one month, measured in Gigabytes. ✓
'Uncapped' more expensive because potentially more data may be used by the client, than if a fixed cap had been negotiated. (The ISP must be able to recover the expense, and so passes some of it onto the client.) ✓ (2)
- 5.2 Any TWO of: ✓✓
- Limited or slow access if signal is poor (i.e. if area has poor coverage)
 - You cannot really escape communication (e.g. e-mails), thus information overload and potentially more stress
 - Online privacy or security could be an issue
 - Ethical issues (use of portable devices in inappropriate areas or situations) (2)
- 5.3.1 Any ONE of: ✓
- Dropbox
 - SkyDrive
 - DROPitTOMe
 - www.filegooi.co.za , etc. (1)
- 5.3.2 Syncing: if you put a new (updated) version of a file on the system, it can automatically update other copies of the file that you have on other Internet-connected devices, i.e. you can always be sure that you're working with the latest version of the file, irrespective of the device that you are using. ✓ (1)
- 5.3.3 Any ONE of: ✓
- File extensions are not blocked.
 - Files are backed up by the system.
 - Save space on your local hard drive.
 - Online systems can be used to synchronise ('sync') your files. (1)

5.4 Any TWO of: ✓✓

- Use with a package like Skype – chatting online with family and friends
- Video conferencing
- Webcam Games
- Can log on using facial recognition

[Do not accept other contrived situations, where a digital camera would more certainly be used]

(2)

[15]

Question 6: Information Management

6.1 Any TWO of: ✓✓

- Easy to search through data
- No need to retype data
- Any number of people can access the data
- Saves space compared to hardcopy
- Easy to manipulate/change/edit/sift data
- Easy to present data in different formats
- Easy to communicate/share data, etc.

(2)

6.2.1 To gather data/information on respondents' attitudes/knowledge/choices/preferences on a topic ✓ (1)

6.2.2 Any TWO of: ✓✓

- Ensure it is not cluttered
- Emphasises critical word/instructions
- Make use of closed questions
- Clear instructions
- Grouping details logically
- Consistency in fonts
- Use simple language / Avoid technical jargon
- Provide enough space for answers/Adding suitable controls e.g. table.

(2)

6.3.1 Any TWO of: ✓✓

- No need to recapture data
- Can validate data while it is being completed
- Cheaper to conduct
- Immediate response etc.

[Do not accept answers related to the respondents' perspective]

(2)

6.3.2 Any ONE of: ✓

- A lack of an interviewer to clarify questions
- Possible cost implications for respondent, etc.

[Only accept answers respondents' perspective.]

(1)

- 6.4 Any TWO of: ✓✓
- Easier/quicker to capture
 - Easier to validate responses
 - Fewer problems in terms of interpreting handwriting
 - Quicker for respondents to answer, etc. (2)
- [10]**

Question 7: Social Implications

- 7.1.1 There has to be an 'acceptance' by the user of another user as an IM contact / Cannot stay anonymous. ✓ (1)
- 7.1.2 Any ONE of: ✓
- Can be used to spread malware (accept suitable example)
 - Constant distraction
 - Can lead to anti-social behaviour (stop talking with people on face-to-face basis) (1)
- 7.1.3 Any ONE of: ✓
- WhatsApp / Skype / Twitter / BBM / SnapChat / WeChat / Gtalk or hangouts / KiK / Viber / Windows Live messenger / Facebook Messenger / Yahoo! Messenger, etc. (1)
- 7.2 Anti-virus software detects viruses based on the virus/signatures/definitions it has at its disposal, so it needs to be updated to combat new virus strains. ✓
- A firewall works on a set of rules that can set to allow/prevent programs access to and from the Internet and therefore does not need updating. ✓ (2)
- 7.3 Grid computing ✓
- Any ONE suitable example such as solving complex mathematical problems etc. ✓
- Botnet/Zombies ✓
- Any ONE suitable example such as denial of service attacks etc. ✓ (4)
- 7.4 Any ONE of: ✓
- Any answer relating to removal of data/information.
 - Bringing unauthorised software (incl. games, videos, etc.) to load and use without permission on company computers, thereby wasting company time / loss of productivity. (1)
- [10]**

Question 8: Solution Development

- 8.1.1 Any TWO of: ✓✓
- Rows 2 and 3 needs to be deleted
 - Need to be 'separate' headings for column E and F
- [Also accept: Complete the calculations in Column F]* (2)
- 8.1.2 The cell reference E2 would change when it should stay the same. ✓
- Use absolute addressing ✓ (Accept new cell referencing e.g. \$E\$2 for this mark) (2)

- 8.2.1 Any ONE of: ✓
- Vlookup
 - Nested IF
- (1)
- 8.2.2 Conditional formatting ✓
- [Also accept Sorting or Creating a bar/column chart]*
- (1)
- 8.2.3 Any ONE of: ✓
- Difficulties with sorting
 - There may not be consistency in terms of use/positioning of comma
 - Cannot easily see which names/surnames might be missing, etc.
- (1)
- 8.3 All changes made to the document by reviewers are visible. ✓
- Advantages: Any ONE of: ✓
- Multiple reviewers can edit the document
 - Author can decide which changes to accept or reject
 - Can view changes per reviewer
 - Can view what final document would like before accepting changes, etc.
- (2)
- 8.4 Add a bookmark to the explanation of this word in the Glossary. ✓
- Add a hyperlink on the on the word Pinterest which links to the bookmark you created. ✓
- (2)
- 8.5 Copy the Word table to Excel. ✓
- Add functions to calculate the averages for the four terms. ✓
- Use the appropriate labels, formatting and data to create the column chart/graph. ✓
- Copy the column chart/graph to the Word document you want it to appear in. ✓
- (4)
- [15]**

Question 9: Integrated Scenario

- 9.1 Video editing and animation software requires: Any TWO of: ✓✓
- higher processing power (CPU)
 - higher-end graphics cards
 - more storage space
- (2)
- 9.2 Any TWO of: ✓✓
- more portable, i.e. easier to demonstrate to people while walking around
 - can use gestures (tablet feature) instead of keyboard and mouse / touchpad
 - e-reader has dedicated features – optimised for reading books on-screen
- (2)
- 9.3.1 Adjust settings (contrast, brightness, etc.) ✓
- (1)
- 9.3.2 Any ONE of: ✓
- Sound is muted (turned off) – turn back on
 - Sound is turned down (too soft to hear) – increase volume
 - Speaker is damaged (unlikely, but possible) – test a different speaker
 - Software problem (driver did not load at bootup) – reboot PC
- (1)

- 9.4.1 Via USB cable ✓
Remove memory card from camera and plug into card reader on computer ✓ (2)
- 9.4.2 Advantage: good, high quality colour printouts ✓
Disadvantage: Any ONE of: ✓
- Expensive, especially if photo paper is used
 - Very slow (2)
- 9.4.3 Any TWO of: ✓✓
- Reduce size of photos – print two or more photos per page
 - Don't throw empty print cartridge away – rather recycle (or refill)
 - Use a lower resolution (use less ink or toner)
 - If printout is rejected by visitor for any reason, don't throw paper away – rather keep for 'draft' printing or other use (2)
- 9.5.1 Any ONE of: ✓
- E-mail
 - Web page hosting
 - Fax-to-email
 - Spam filtering (1)
- [Do not accept provisioning of Internet Access, data bundles etc.]*
- 9.5.2 Any TWO of: ✓✓
- Simultaneous use of landline for Internet access and telephone calls
 - Don't need to 'connect' to Internet – connection is permanently 'on'
 - Most ADSL routers include WiFi connectivity – set up mobile home network
 - Can be faster and more reliable than wireless connections (2)
- 9.6.1 Digital divide: The gulf that exists between the 'haves' and the 'have-nots' in terms of technology – more affluent societies generally have better access to the latest devices etc. ✓
- People 'negatively affected' might therefore not have Internet access, or not know how to use Google Maps, etc. ✓ (2)
- 9.6.2 GPS ✓ (1)
- 9.6.3 Convergence: the 'bringing together' or combining of multiple technologies into a single, multi-purpose device ✓ (1)
- [Also accept specific examples]*
- 9.7.1 Any TWO of: ✓✓
- Can work at your own pace
 - Immediate assessment and feedback – don't have to wait for work to be marked
 - Better motivation to learn
 - Software allows features unavailable in more traditional methods – multimedia, etc. (2)
- 9.7.2 Operating system ✓ (1)

- 9.7.3 Any ONE of: ✓
- Smartphone
 - Tablet computer
 - Consumer tablet
- (1)
- 9.8.1 To end a non-responding application (i.e. if an application 'freezes', or 'hangs') ✓ (1)
- 9.8.2 File while still on CD is read-only – cannot save directly to a CD, like a flash drive ✓
Copy file to another location that allows data to be written directly (e.g. hard drive) ✓ (2)
- 9.9.1 It is a protocol that allows telephone calls (i.e. voice) to be made over computer networks including the Internet ✓ (1)
- 9.9.2 Skype ✓ (1)
- 9.9.3 Microphone / Speakers / headset ✓ (1)
- 9.9.4 Skype (especially when it includes video content) requires a lot of bandwidth, i.e. uses a lot of data. This can translate into additional expense for the school, if they exceed their monthly cap and need to buy more. ✓ (1)
- 9.10.1 A type of malware / destructive program ✓
disguised as a useful application ✓ (2)
- 9.10.2 Move the file to a special area of the disk, where it can no longer be a danger to other data or software on the disk. ✓ (1)
- 9.11 Attempt to manipulate or trick someone into revealing sensitive personal information (e.g. passwords, PIN codes, account numbers), ✓
which can then be used to impersonate them, for fraudulent / criminal purposes ✓ (2)
- 9.12 Any TWO of: ✓✓
- Steal processing time and power (i.e. use school computer for private purposes)
 - Steal bandwidth, e.g. watch YouTube videos
 - Steal data / intellectual property (e.g. school projects), via network transfers (not via flash drive)
 - Use school computers for 'hacking' or 'cracking'
 - Identity theft – use school computers to impersonate others (cyber-bullying, etc.)
 - Illegal downloads, etc.
- (2)
- 9.13.1 E-mail message intended to deceive / defraud / threaten / cheat other people ✓ (1)
[Accept specific examples: get-rich-quick schemes, fad diets, chain letters, etc.]
- 9.13.2 Any TWO of: ✓✓
- Never accept information at face value – always question what you read or receive
 - Check source of e-mail – is it reliable or not
 - Delete hoaxes, do not send them on
 - Try to distinguish between urban legend and hard fact
 - Try to be careful, suspicious and honest, etc.
- (2)

- 9.14.1 Any ONE of: ✓
- Braille keyboard
 - Large-key keyboards
- [Accept only INPUT devices, not screen magnification devices, etc.] (1)
- 9.14.2 Any ONE of: ✓
- Eye tracking devices
 - Head movement devices
 - Large-key keyboards
 - Large trackballs
 - Joysticks
 - Foot pedal control devices
 - Sip-and-puff devices, etc.
- [Accept only INPUT devices, not screen magnification devices etc.]
- 9.15.1 Form ✓ (1)
- 9.15.2 Any TWO of: ✓✓
- validation rule
 - input mask
 - default value
 - drop-down box
 - indexing (i.e. disallowing duplicate entries) (2)
- 9.15.3 Word processor / Microsoft Word / Word ✓ (1)
- 9.15.4 Any TWO of: ✓✓
- More functions available
 - Charting facilities available
 - Spreadsheet designed to work with numbers
 - Easier and quicker to test 'what-if' scenarios
 - Can use conditional formatting, etc. (2)
- 9.16.1 Any ONE of: ✓
- Will help you not to forget a closing tag
 - Easier to interpret or 'follow' code (1)
- 9.16.2 It is much easier to fix code mistakes one at a time, by previewing frequently ✓ (1)

[50]