



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

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**INFORMATION TECHNOLOGY P2
MEMORANDUM**

MARKS: 150

This memorandum consists of 10 pages.

SECTION A: MULTIPLE-CHOICE QUESTIONS AND MATCHING THE COLUMNS**QUESTION 1**

- 1.1 A / Non-volatile (1)
- 1.2 C / Typing (1)
- 1.3 D / point-to-point (1)
- 1.4 D / ROM chip on the motherboard. (1)
- 1.5 B / Delphi (1)
- 1.6 B / protocol (1)
- 1.7 A – directs you to websites you do not intend going to. (1)
- 1.8 B – Octopus (1)
- 1.9 D – WiMAX; WiFi; Bluetooth (1)
- 1.10 C – Social office (1)
- 1.11 B – Video camera (1)
- 1.12 E – DIMM (1)
- 1.13 F – CMOS memory (1)
- 1.14 D – Text file saved on your computer by a website. (1)
- 1.15 K – Keyboard (1)
- 1.16 C – Backbone (1)
- 1.17 I – FTP (1)
- 1.18 G – DVD (1)
- 1.19 J -- Brain (1)
- 1.20 H – Spam (1)
- 1.21 15 (1)
- 1.22 1 (1)
- 1.23 52.5 (2)
- 1.24 h (1)

TOTAL SECTION A: 25

SECTION B: SYSTEM TECHNOLOGIES**QUESTION 2**

- 2.1 2.1.1 ✓ An App is short for mobile application which is application software designed to fulfil a particular purpose ✓ and is designed to run on mobile devices. (2)
- 2.1.2 ✓ iOS (1)
- 2.1.3 ✓ The OS provides the GUI that allows us to interact with the computer. (provides an interface)
✓ The OS manages and controls all the activities that take place in a computer. (2)
- 2.1.4 ✓ Multithreading is the ability of the operating system to allow applications to split themselves into multiple tasks (or threads) ✓ that can be run at the same time as if they were separate programs. (2)
- 2.1.5 ✓ Multitasking
✓ When different programs are active and the OS splits the CPU time between the active programs and give each program a few fractions of a second of access time to the CPU so that it appears to run multiple programs at the same time.
✓ Multiprocessing
✓ When the CPU consists of more than one physical CPU, then the OS divides the programs/threads/processes between more than one physical CPU. (4)
- 2.2 2.2.1 ✓ All the data and instructions (like this application) have to be loaded into the RAM before the ✓ CPU can work with it. (2)
- 2.2.2 ✓ The OS can make use of virtual memory. (1)
- 2.2.3 ✓✓ When your operating system uses virtual memory too often, the computer will become very slow and unresponsive – trying to swap pages between the virtual memory and the actual RAM. (2)
- 2.3 2.3.1 ✓ Modular design (1)
- 2.3.2 ✓ RAM
✓ CPU (Processor) (2)

2.3.3

	Characteristic	HDD	SSD
(a)	Capacity	✓ Typically 500 GB – 2 TB for notebook size drives	✓ Typically not larger than 512 GB for notebook size drives
(b)	Noise	✓ Audible clicks and spinning can be heard	✓ No moving parts and as such no sound.
(c)	Cost	✓ Cheap	✓ Expensive

(6 ÷ 2) (3)

2.3.4.1 (a) ✓The main role of the motherboard is to make sure that all the parts can communicate with one another. (1)

(b) ✓The system clock is a very small quartz crystal that pulses at a regular frequency. (1)

2.3.5 ✓Plug and Play (1)

TOTAL SECTION B: 25

SECTION C: COMMUNICATION TECHNOLOGIES AND NETWORK TECHNOLOGIES

QUESTION 3

- 3.1 Internet
 ✓✓ A worldwide computer network, consisting of devices, computers and networks connected to one another.
 WWW
 ✓✓ WWW is a service on the Internet. It consists of a vast collection of interlinked, interactive documents stored on computers all over the world. (4)
- 3.2 3.2.1 ✓Once you send the message, it is sent to the e-mail server at your ISP
 ✓It is then sent to the e-mail server at the receiver's ISP.
 ✓The message is held at this e-mail server until the recipient checks their e-mail and downloads the e-mail messages. (3)
- 2.2.2 ✓SMTP (1)
- 3.2.3 (It does not matter which one they choose, as long as the reason given is correct.)
 CC – ✓ The e-mail addresses do not need to be kept in secret, as the committee needs to communicate with each other and they probably know the e-mail addresses of the others. It will also make it easier when you want to make use of the Reply All function.
 Bcc – ✓ You do not want the committee to know the e-mail addresses of the other committee members, as it is confidential information. (1)
- 3.2.4 ✓ Create a group. (1)
- 3.2.5 Any ONE of the following (or another appropriate service):
 ✓GoogleDrive
 ✓Dropbox
 ✓SkyDrive (1)
- 3.3 3.3.1 ✓ Skype (1)
- 3.3.2 ✓ VoIP (1)
- 3.4 3.4.1 ✓ HAN (Home Area Network) (1)
- 3.5 3.5.1 ✓An ADSL modem converts the data for high speed data transfer ✓over digital telephone networks using a normal telephone line. (2)
- 3.5.2 ✓ WiFi access point (1)

3.6 (Any THREE)

✓ By setting your screen setting to automatically switch off the screen after a time when you are not using it and by setting it to a lower brightness level.

✓ Closing apps that you are not using.

✓ Close the GPS.

✓ Switching off your Bluetooth and WiFi.

✓ Do not use the media player too much.

(3)

TOTAL SECTION C: 20

SECTION D: DATA AND INFORMATION MANAGEMENT**QUESTION 4**

- 4.1 ✓A database is a collection of data or facts ✓regarding a specific topic. (2)
- 4.2 (Any TWO roles of a DBA)
 ✓Manages and maintains databases.
 ✓They control the allocation and supervision of users of the database and their access rights.
 ✓They also perform routine maintenance on the database.
 ✓Installing and configuring software on additional servers, ensuring systems have enough storage and memory.
 ✓Implementing a good backup policy. (2)
- 4.3 4.3.1 ✓Desktop databases (1)
- 4.3.2 (Any TWO rules)
 ✓Gender field: ="M" Or "F"
 ✓Age field: Between 13 And 19
 OR >=13 AND <=19
 ✓Team field: "Sticks" OR "Shovels" OR "Anchors" (2)
- 4.3.3 ✓ Create a Combo box / List box. (2)
- 4.3.4 (a) ✓A primary key is a field which identifies each record
 ✓with a unique value. (2)
- (b) (Any suitable primary key)
 E.g. SwimmerID (1)
- 4.4 (Any THREE with descriptions)
 ✓**Format check**
 ✓Data such as dates and telephone numbers need to be entered in a specific format
 ✓**Data type checks**
 ✓Check that the correct data type is entered – not a 0 instead of an O.
 ✓**Range checks**
 ✓The interval or boundaries need to be checked. (E.g. Only M/F for gender)
 ✓**Presence check**
 ✓Showing error messages if important fields are left empty. (6)
- 4.5 ✓Centralised
 ✓The data is not copied to other servers. (2)

TOTAL SECTION D: 20

SECTION E: SOLUTION DEVELOPMENT**QUESTION 5**

5.1 ✓ Reading the results out of a text file ✓into an array ✓sorting it. (3)

5.2 Type
 ✓✓ TarrName = array[1..10] of string;
 ✓✓ TarrTime = array[1..10] of real;
 Private
 arrName : TarrName;
 arrTime : TarrName;

OR

Private
 ✓✓ arrName : array[1..10] of string;
 ✓✓ arrTime : array[1..10] of real; (4)

5.3 a – k ✓
 b – k ✓
 c – l ✓
 d – l ✓ (4 ÷ 2) (2)

5.4 ✓At the for-loops...
 ✓The variables 'k' and 'l' is declared under private, instead of locally!! A for-loop variable must be declared locally. (2)

5.5 ✓Syntax error
 ✓Errors in the way the code has been written, for example semi-colon is missing or a spelling mistake.
 ✓Logic error
 ✓It is a logical or calculation error made by the programmer, for example you said 2*iNum instead of 2/iNum.
 ✓Runtime error
 ✓Errors that result in a crash half way through the program, for example trying to divide by 0, or working with a file that does not exist or entering text instead of a number ... (6)

5.6 **E.g. Reuben Vlok, 30.78**
 1 mark for the comma (it MUST be a comma)
 1 mark for a space after the comma
 1 mark for the name and the time (3)

TOTAL SECTION E: 20

SECTION F: INTEGRATED SCENARIO**QUESTION 6**

- 6.1 ✓Data is raw, unprocessed facts – the swimmers finishing times.
✓Information is the result of the processing of data and should be useful and meaningful – the list of placings according to times swam. (2)
- 6.2 6.2.1 A network is a ✓ collection of computers (or other computing devices) ✓that is connected by some sort of communication media ✓to allow users to share hardware, software, data and information and to communicate. (3)
- 6.2.2 The NIC
✓ get data from the rest of the computer system and encode the data so that it can be sent over a specific medium.
✓receives data over the medium and decodes it so that it can be understood by the rest of the computer system. (2)
- 6.2.3 ✓WLAN (1)
- 6.2.4 ✓ 3G / 4G / WiMAX (Any TWO) (2)
- 6.2.5 (a) ✓ The data transmission over a cabled LAN is much faster than over a WLAN. (1)
- (b) ✓UTP
✓Relatively cheap
✓Will only be used over short distances. (3)
- (c) (Any TWO of the following)
✓Attenuation
✓Eavesdropping
✓Crosstalk
✓Electromagnetic interference (EMI) (2)
- 6.3 ✓To outline the rights and ✓responsibilities of users especially in network environments. (2)
- 6.4 6.4.1 GIGO = Garbage In, Garbage Out
✓This means that if incorrect data has been input, ✓then the computer will not sort it out – the output produced will also be a ‘mess’. (2)
- 6.4.2 (Any THREE of the following OR an acceptable example)
✓Accidentally deleting files or formatting a disk
✓Not ensuring that regular backups are made
✓Entering incorrect data in a program
✓Losing or misplacing portable storage devices
✓Allowing other unauthorised users to get access to data by not following basic principles such as having a secure password and changing it on a regular basis. (3)

- 6.5 ✓✓ A firewall acts as a barrier between the computer and the internet. It checks which programs are trying to access your computer via the Internet or are trying to access the Internet from your computer. (2)
- 6.6 6.6.1 ✓ Web 2.0
 ✓ It is interactive!! It is dynamic – users can add content (blogs / videos / comments) (2)
- 6.6.2 ✓ Dynamic page
 ✓ Makes social web possible (blogs, vblogs ...) / Great for customisable pages that need frequent updating.
OR (Actually only Dynamic is correct, but if they can justify their answer as static page, they can get the mark)
 ✓ Static page
 ✓ Relatively simple to design / Can be interactive (2)
- 6.6.3 ✓ Live blogging (1)
- 6.6.4 ✓ Adobe Flash OR Real Player (or any other acceptable plugin) (1)
- 6.6.5 ✓ MPEG is used for the compression of audio and visual digital data and uses lossy compression
 ✓ Uploading other video files can be too large and difficult to download or stream, using a lot of data. (2)
- 6.7 6.7.1 ✓ Software that you buy in stores, software in boxes sealed with shrink wrap. (1)
- 6.7.2 ✓ Piracy (1)
- 6.8 6.8.1 ✓ Green computing (1)
- 6.8.2 ✓ Resolution refers to the number of pixels used to form the screen image. (1)
- 6.9 (Any THREE)
 ✓ Fast, efficient communication
 ✓ Sharing of hardware resources
 ✓ Centralisation of data
 ✓ Transfer of files
 ✓ Increased control and security
 ✓ Flexible access
 (Leisure) (3)

TOTAL SECTION F: 40
GRAND TOTAL: 150

6.5	✓ 'n <i>Firewall</i> tree op as 'n beskerming tussen die rekenaar en die Internet. Dit kyk of programme probeer om via die Internet toegang tot jou rekenaar wil verkry, of anders of programme op jou rekenaar probeer om toegang tot die Internet te kry.	(2)
6.6	6.6.1 ✓ Web 2.0 ✓ Dit is interaktief!! Dit is dinames – gebruikers kan inhoud toevoeg (blogs / video's / kommentaar)	(2)
6.6.2	✓ Dinamiese blaaie ✓ Maak sosiale web moontlik (blogs, vlogs ...) / Wonderlik vir aanpasbare bladsye wat gereelde opdatering benodig. OF (Eintlik is net Dinamiese reg, maar as hulle hul antwoord kan regverdig as statiese blaaie, kan hulle die punt kry) ✓ Statiese blaaie ✓ Relatiewe maklik om te ontwerp / Kan interaktief wees	(2)
6.6.3	✓ <i>Live blogging</i>	(1)
6.6.4	✓ Adobe Flash OF Real Player (of enige ander aanvaarbare plugin)	(1)
6.6.5	✓ MPEG word gebruik vir die kompressie van audio en visuele digitale data en gebruik lossy kompressie. ✓ Die oplaai van ander video's kan te groot en te moeilik wees om af te laai of te <i>stream</i> , wat baie data kan gebruik.	(2)
6.7	6.7.1 ✓ Programmatuur wat jy in winkels koop, programmatuur in bokse, gesêel met kleefplastiek (<i>shrink wrap</i>).	(1)
6.7.2	✓ Piracy	(1)
6.8	6.8.1 ✓ Groenrekenarisering	(1)
6.8.2	✓ Resolusie verwy's na die aantal beeldelemente (pixels) wat gebruik is om die skermprintjie te skep.	(1)
6.9	(Enige DRIE) ✓ Vinnige, effektiewe kommunikasie ✓ Deel van apparatuur ✓ Sentralisering van data ✓ Ordra van lêers ✓ Verhoogde beheer en sekuriteit ✓ Verskeidenheid van toegang (Ontspanning)	(3)

TOTAAL AFDELING F: 40
 GROOTTOTAAL: 150

- 6.1 ✓ Data is rou, onverwerkte fêite – die swemmers se eindtye.
 ✓ Inligting is die resultaat van die verwerking van data en moet betekenisvol wees – die lys van plasing volgans die tye wat geswem is. (2)
- 6.2 'n Netwerk is 'n versameling van rekenaars (of ander rekenartoeestelle) ✓ wat gekoppel is deur een of ander soort kommunikasie-media ✓ sodat gebruikers apparatuur, programmatuur, data en inligting te kan deel en te kan kommunikeer. (3)
- 6.2.2 Die NIC (netwerkoppelvlakbeheerder) ✓ kry data van die res van die rekenaarstelsel en dit te enkodeer sodat dit oor 'n spesifieke medium gestuur kan word. ✓ ontvang data oor die medium en dekodeer dit sodat dit deur die res van die rekenaarstelsel verstaan kan word. (2)
- 6.2.3 ✓ WLAN (1)
- 6.2.4 ✓ 3G / 4G / WiMAX (Enige TWEE) (2)
- 6.2.5 (a) ✓ Die dataoordrag oor 'n bekabelde netwerk is baie vinniger as oor 'n WLAN. (1)
 (b) ✓ UTP
 ✓ Relatief goedkoop
 ✓ Sal net oor kort afstande gebruik word. (3)
 (c) (Enige TWEE van die volgende)
 ✓ *Attenuation*
 ✓ Afkusting
 ✓ Gekruiste lyne
 ✓ Elektromagnetiese stremisse (EMI) (2)
- 6.3 ✓ Om die regte en ✓ verantwoordelikhede van gebruikers, veral in netwerkomgewings, te bely. (2)
- 6.4 6.4.1 GIGO = Garbage In, Garbage Out
 ✓ Dit beteken dat as verkeerde data ingevoer is, ✓ dan sal die rekenaar dit nie uitsorteer nie – die afvoer wat geproduseer word sal ook 'n 'gemors' wees. (2)
- 6.4.2 (Enige DRIE van die volgende OF 'n aanvaarbare voorbeeld.)
 ✓ Perongeluk leers uitgee of 'n skryf geformateer
 ✓ Nie seker maak dat gereelde rugsteun gemaak word nie
 ✓ Sleutel verkeerde data in 'n program in
 ✓ Bergingsstoesstelle verloor of misplaas
 ✓ Deur ander ongemagtigde gebruikers toe te laat om toegang tot data te verkry deur nie basiese prinsiepe soos die gebruik van 'n sekure wagwoord te hê nie en dit ook nie op 'n gereelde basis te verander nie. (3)

AFDELING E: OPLOSSINGSONTWIKKELING

VRAAG 5

- 5.1 ✓ Lees resultate uit 'n teksleër ✓ in 'n skikking ✓ sorteer dit. (3)
- 5.2 Type
 ✓ ✓ TarrName = array[1..10] of string;
 ✓ ✓ TarrTyd = array[1..10] of real;
 Private
 arrName : TarrName;
 arrTyd : TarrName;
OF
 ✓ ✓ arrName : array[1..10] of string;
 ✓ ✓ arrTyd : array[1..10] of real; (4)
- 5.3 a - k ✓
 b - k ✓
 c - l ✓
 d - l ✓ (2) (4 ÷ 2)
- 5.4 ✓ By die for-lusse...
 ✓ Die veranderlikes 'k' en 'l' is onder private verklaar, in plaas van lokaal!!
 'n For-lus veranderlike moet lokaal verklaar word. (2)
- 5.5 ✓ Sintaksfoute
 ✓ Foute wat in die programkode voorkom soos wat dit geskryf is,
 byvoorbeeld 'n kommapunt is uitgelaat of 'n spelfout.
 ✓ Logiese fout
 ✓ Dit is 'n logiese of 'n bewerkingsfout wat deur die programmeerder
 gemaak is, byvoorbeeld jy het gesê 2*!Nom in plaas van 2!/Nom.
 ✓ Uitvoertout (*Runtime error*)
 ✓ Foute wat veroorsaak dat die program halfpad *crash*, byvoorbeeld
 indien jy probeer om deur 0 te deel, of deur van 'n program gebruik te
 maak wat nie bestaan nie, of deur teks in te sleutel in plaas van 'n
 nommer ... (6)
- 5.6 **Bv. Reuben Vlok, 30.78**
 1 punt vir die komma (dit MOET 'n komma wees)
 1 punt vir 'n spasie na die komma
 1 punt vir die naam en die tyd (3)

TOTAAL AFDELING E: 20

AFDELING D: DATA- EN INLICHTINGSBESTUUR

VRAAG 4

4.1	✓ 'n Databasis is 'n versameling van data of feite ✓ aangaande 'n spesifieke onderwerp.	(2)
4.2	(Enige TWEE rolle van 'n DBA) ✓ Bestuur en hou databasisse in stand. ✓ Hulle beheer die toekennings van en toesig oor gebruikers van die databasis en hul toegangsregte. ✓ Hulle doen ook roetine-instandhouding van die databasis. ✓ Installering en konfigurasie van programmatuur op addisionele bedieners, om seker te maak stelsels het genoeg berging en geheue. ✓ Implementering van 'n goeie rugsteunbeleid.	(2)
4.3	4.3.1 ✓ Desktop databasisse	(1)
4.3.2	(Enige TWEE reëls) ✓ Geslagveld: ="M" Or "V" ✓ Ouderdomveld Between 13 And 19 OF >=13 AND <=19 ✓ Spanveld: "Stokke" OR "Grawe" OR "Ankers"	(2)
4.3.3	✓ Skep 'n Combo box / List box.	(2)
4.3.4	(a) ✓ 'n Primêre sleutel is 'n veld wat elke rekord uniek identifiseer ✓ met 'n unieke waarde.	(2)
(b)	(Enige gepaste primêre sleutel) Bv. SwemmerID	(1)
4.4	(Enige DRIE met beskrywings) ✓ Toets die formaat ✓ Data soos datums en telefoonnommers moet in 'n sekere formaat ingevoer word. ✓ Toets die datatipe ✓ Kyk dat die regte datatipe ingesleutel is – nie 'n 0 in plaas van 'n 0 nie. ✓ Toets die interval of grense ✓ Die interval of grense moet gekyk word. (Bv. Net M/V vir geslag) ✓ Toets of data ingevoer is ✓ Vertoon foutboodskappe indien belangrike veldde oopgelaat is.	(6)
4.5	✓ Gesentraliseerd ✓ Die data is nie na ander bedieners gekopieer nie.	(2)
TOTAAL AFDELING D: 20		

3.6

(Enige DRIE)

✓Deur jou skerminstellings te stel sodat wanneer jy dit nie gebruik nie, dit outomates die skerm na 'n tydperk afskakel en deur die ligintensiteit op 'n laer vlak te stel.

✓Maak toepassings wat jy nie gebruik nie, toe.

✓Maak die GPS toe.

✓Skakel jou Bluetooth and WiFi af.

✓Moenie jou mediaspeler te veel gebruik nie.

(3)

TOTAAL AFDELING C: 20

AFDELING C: KOMMUNIKASIE- EN NETWERKTEKNOLOGIE

VRAAG 3

- 3.1 Internet
- ✓ ✓ 'n Wêreldwye rekenaar netwerk, wat uit toestelle, rekenars en netwerke bestaan wat aan mekaar gekoppel is.
- WWW
- ✓ ✓ WWW is 'n diens op die Internet. Dit bestaan uit 'n wye versameling geïntegreerde, interaktiewe dokumente wat op rekenars regoor die wêreld gestuur is.
- 3.2
- 3.2.1 ✓ Sodra jy die boodskap stuur, word dit na jou e-posbediener se ISP gestuur
- ✓ Dan word dit na die e-posbediener van die ontvanger se ISP gestuur.
- ✓ Die boodskap word by die e-posbediener gehou totdat die ontvanger hul e-pos kyk en die e-pos boodskappe aflaai.
- (3)
- 2.2.2 ✓ SMTP
- (1)
- 3.2.3 (Dit maak nie saak watter een hulle kies nie, solank die gegewe rede reg is.)
- CC – ✓ Die e-posadres hoef nie in die geheim gehou te word nie, aangesien die komitee met mekaar moet kommunikeer en hulle sal tien teen een mekaar se e-posadresse ken. Dit sal dit ook makliker maak wanneer jy van die *Reply All* funksie gebruik maak.
- Bcc – ✓ Jy wil nie hê die komitee moet die e-posadresse van al die ander komiteeledes sien nie, aangesien dit vertroulike inligting is.
- (1)
- 3.2.4 ✓ Skep 'n groep.
- (1)
- 3.2.5 Enige EEN van die volgende (of ander gepaste diens):
- ✓ GoogleDrive
- ✓ Dropbox
- ✓ SkyDrive
- (1)
- 3.3
- 3.3.1 ✓ Skype
- (1)
- 3.3.2 ✓ VoIP
- (1)
- 3.4
- 3.4.1 ✓ HAN (Huisarea netwerk / Home Area Network)
- (1)
- 3.5
- 3.5.1 ✓ 'n ADSL modem skakel die data vir hoëspoed dataoortrag deur 'n normale telefoonlyn te gebruik.
- (2)
- 3.5.2 ✓ WiFi toegangspunt / *WiFi access point*
- (1)

2.3.3

	Eienskap	HDD	SSD
(a)	Kapasiteit	✓ Gewoonlik 500 GB – 2 TB vir notebook grootte skywe	✓ Gewoonlik nie groot as 512 GB vir notebook grootte skywe
(b)	Geraas	✓ Hoorbare kliks en spinklank kan gehoor word.	✓ Geen bewegende dele en daarom geen klank.
(c)	Koste	✓ Goedkoop	✓ Duur

(3) $6 \div 2 = 3$

2.3.4

(a) ✓ Die hooftrol van die moederbord is om seker te maak dat al die dele met mekaar kan kommunikeer.

(b) ✓ Die steiseiklok is 'n baie klein kwartskristal wat teen 'n konstante tempo puls.

2.3.5

✓ *Plug and Play*

(1)

(1)

(1)

TOTAAL AFDELING B: 25

AFDELING B: STELSELTEGNOLOGIE

VRAAG 2

2.1	2.1.1	✓ 'n Toep (<i>App</i>) is kort vir 'n mobiele toepassing, wat toepassingprogrammatuur is en ontwikkel is om aan 'n spesifieke doel te voldoen. ✓ Dis ontwerp om op mobiele toestelle te werk.	(2)
	2.1.2	✓ OS	(1)
	2.1.3	✓ Die BS voorsien die GUI wat interaksie tussen ons en die rekenaar in staat stel. (voorsien 'n koppelvak) ✓ Die BS bestuur en beheer al die aktiwiteite wat in 'n rekenaar plaasvind.	(2)
	2.1.4	✓ Multidraadverwerking is die vermoë van 'n bedryfstelsel om dit vir programme moontlik te maak om hulself in 'n klomp take (of <i>threads</i>) te verdeel sodat daardie take tegelyk kan uitvoer asof hulle verskillende programme is.	(2)
	2.1.5	✓ <u>Multitaaiverwerking</u> ✓ Wanneer verskillende programme aktief is en die BS die SVE tyd tussen die aktiewe programme split en aan elke program 'n paar fraksies van 'n sekonde toegangs tyd tot die SVE gee sodat dit voorkom asof meervoudige programme op dieselfde tyd uitgevoer word. ✓ <u>Multiverwerking</u> ✓ Wanneer die SVE uit meer as een fisiese SVE bestaan, dan verdeel die BS die programme/ <i>threads</i> /prosesse tussen meer as een fisiese SVE.	(4)
2.2	2.2.1	✓ Al die data en instruksies (soos hierdie program) moet in die RAM gelaai wees voordat die ✓ SVE daarmee kan werk.	(2)
	2.2.2	✓ Die BS kan van virtuele geheue gebruik maak.	(1)
	2.2.3	✓ Wanneer jou bedryfstelsel te gereeld virtuele geheue gebruik, sal die rekenaar baie stadig word en nie reageer nie – dit probeer bladsye tussen die virtuele geheue en die werklike RAM uitruil.	(2)
2.3	2.3.1	✓ Modulêre ontwerp	(1)
	2.3.2	✓ RAM ✓ SVE (Processor/CPU)	(2)

**AFDELING A: MEERVOUDIGEKEUSE-VRAE EN PAS DIE KOLOMME
BYMEKAAR**

VRAAG 1

1.1	A / Bestendig	(1)
1.2	C / Tik (<i>Typing</i>)	(1)
1.3	D / punt-to-punt	(1)
1.4	D / ROM skyfie op die moederbord.	(1)
1.5	B / Delphi	(1)
1.6	B / protokol	(1)
1.7	A – lei jou na webtuistes waarheen jy nie veronderstel was om te gaan nie.	(1)
1.8	B – Octopus	(1)
1.9	D – WiMAX; WiFi; Bluetooth	(1)
1.10	C – Sosiale kantoor	(1)
1.11	B – Videokamera	(1)
1.12	E – DIMM	(1)
1.13	F – CMOS-geheue	(1)
1.14	D – Tekslêer op jou rekenaar deur 'n webtuiste gestuur.	(1)
1.15	K – Sleutelbord	(1)
1.16	C – Ruggraat / <i>Backbone</i>	(1)
1.17	I – FTP	(1)
1.18	G – DVD	(1)
1.19	J – Brein	(1)
1.20	H – <i>Spam</i>	(1)
1.21	15	(1)
1.22	1	(1)
1.23	52.5	(2)
1.24	h	(1)

TOTAAL AFDELING A:

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Hierdie memorandum bestaan uit 10 bladsye.

PUNTE: 150

INLIGTINGSTEGNOLIE V2 MEMORANDUM

NOVEMBER 2014

GRAAD 11

**NASIONALE
SENIOR SERTIFIKAT**

