Province of the
EASTERN CAPE
EDUCATION

NATIONAL
SENIOR CERTIFICATE

GRADE 11

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INFORMATION TECHNOLOGY P2
MEMORANDUM

MARKS: 180

This memorandum consists of 10 pages.

SECTION A: MULTIPLE-CHOICE QUESTIONS			
QUESTION 1			
1.1	D	RAM, CPU, AGP video and PCI-Express	(1)
1.2	C	Video and high speed storage devices	(1)
1.3	B	Comes in several types, such as data, instruction and address.	(1)
1.4	D	Occurs when a numerical result exceeds the range of a variable type which is being used to represent it	(1)
1.5	B	Games DLL	(1)
1.6	D	192.168.3.200 is a valid IP address	(1)
1.7	A	Interrupt Request	(1)
1.8	C	Prices are more expensive.	(1)
1.9	B	Linux	(1)
1.10	D	A unit which performs mathematical calculations.	(1)
MATCH THE COLUMNS			
1.11	G	Social networking	(1)
1.12	E	Planning	(1)
1.13	A	Refine requirements into specifications.	(1)
1.14	J	Partitioning and formatting	(1)
1.15	F	Transfer of data	(1)
1.16	L	Multithreading	(1)
1.17	B	Internet service provider	(1)
1.18	D	Virtual memory	(1)
1.19	I	Modem	(1)
1.20	C	Value to the company besides physical assets	(1)
		TOTAL SECTION A:	**20**

SECTION B: HARDWARE AND SOFTWARE	
QUESTION 2	

2.1	2.1.1	Input – allow us to get data into the computer √ Output – allow us to get feedback from the computer √ Input device examples: mouse, keyboard, scanner etc. √√ (Any 2) Output device examples: monitor, printer, speakers etc. √√ (Any 2)	(6)
	2.1.2	No. √ The hard drive can only emulate RAM (virtual memory) √ but the computer needs RAM which is where data and instructions are processed. √	(3)
	2.1.3	It is true. √. PCI-Express is the new type of expansion slot available. √√	(3)
	2.1.4	Any three cards like modems, sound cards etc. √√√	(3)
	2.1.5	It is in the processor. √ Because it is in the processor it cannot be upgraded. The whole processor would have to be replaced. √√	(3)
	2.1.6	High speed memory √ built into the CPU √ used to store frequently used data √ and instructions. √	(4)
	2.1.7	Fetch √ an instruction is fetched from memory. √ Decode √ the instruction is decoded. √ Transfer √ data from RAM if necessary. √ Execute √ the instruction. √	(8)
	2.1.8	The system bus is the pathway between the CPU and RAM. √ The system bus continually transfers data between the CPU and memory and thus has to be fast. √ It is a critical performance area √ and is normally mentioned in specifications. √	(4)
	2.1.9	• MRAM uses magnetic rather than electrical charges so it would retain its contents after the power is off. √ • Faster access. √ • Uses less power. √	(3)

	2.1.10	**DRAM**	**SRAM**	
		Must be refreshed	Not	
		Slower	Faster	
		Small structure	Larger structure	
		Less expensive	More expensive	
			(Any 3 x 1)	(3)

	2.2.1	PC's consist of several components that can be swapped and replaced. √√	(2)
	2.3.1	System software and application software √√	(2)
	2.4.1	A driver is software that enables the operating system to communicate with the hardware.	(2)
	2.4.2	The driver is built in to the operating system.	(2)
	2.5	Yes, √ one partitions √ the drive as two logical drives, each containing a different operating system, √ and uses a boot manager. √.	(4)
		TOTAL SECTION B:	**52**

SECTION C: APPLICATIONS AND IMPLICATIONS			
QUESTION 3			
	3.1.1	A hot-spot is a wireless point access to the internet. √	(1)
	3.1.2	(THREE of, or any similar suggestion.) √√√ • Give the workers access to the internet during breaks. • Give workers access to their email during breaks. • Keeps the staff electronically connected. • Gives staff a place to connect their electronic equipment for relaxation. (Any 3 x 1)	(3)
	3.2.1	The digital divide is the technological gap √ between those who have and those who do not have technology. √	(2)
	3.3.1	• Retina scanners √ • Fingerprint readers √	(2)
	3.3.2	A smart card is the size of a credit card √ which contains a small processor and memory. √ This can be used to store details about the employee and his time management. √	(3)
	3.4	IRC – allows a user to communicate with many people in chat rooms. Internet forums – users post comments related to specific topics. E-mail lists – discussion groups using e-mail distribution lists. Blogs – on-line journals Wikis – users collaborate and publish bodies of knowledge. Podcasts – publishing audio/video files played on iPods. IM – communications between people over a network when they are online. (3 only and description) √√√√√√	(6)
		TOTAL SECTION C:	**17**

SECTION D: PROGRAMMING AND SOFTWARE DEVELOPMENT			
QUESTION 4			
4.1	Case statement √		(1)
4.2	4.2.1	While loop. √ You do not know how many records you have to read in the text file. √√	(3)
	4.2.2	Read the data into arrays. √√	(2)

	4.2.3	```Loop j from 1 to numrecords-1 √```
		``` Loop k from j+1 to numrecords √```
		``` If arrSurname[j] > arrSurname[k] √√```
		``` Swop surnames √```
		``` Swop firstnames √```
		``` endLoop```
		```endLoop```
			(6)

4.3	4.3.1	SELECT * √ FROM tblParts √ ORDER BY description √	(3)
	4.3.2	SELECT partNo, manufacturer, desc √√ FROM tblParts √ WHERE stock <= 7 √	(4)
	4.3.3	'DELETE √ FROM tblParts √ WHERE partNo = √ ' + edtDeletePart.text √	(4)
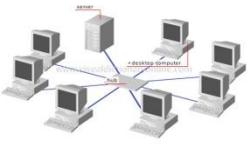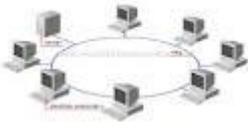
	4.3.4	UPDATE \<table\> √
		SET \<field1\> = \<value1\> √
		        \<field2\> = \<values\>
		        \<WHERE\> \<criteria\> √
			(3)

		TOTAL SECTION D:	**26**

SECTION E: INTEGRATED SCENARIO			
QUESTION 5			
5.1	5.1.1	Wi-Fi is a wireless means of connecting a device to a network. √	(1)

	5.1.2	**Advantages**	**Disadvantages**	
		Portability, mobility	Security	
		Cost savings	Range	
		Flexibility	Reliability	
		Planning	Speed	
		Three each √√√	√√√ (3 + 3)	(6)

5.2	5.2.1	Four of: √√√√ • To share data • To share hardware • To share software • To communicate • Centralisation of data • Transfer of data (Any 4 x 1)	(4)
	5.2.2	Bus √ Star √ Ring √ Star most popular √	(4)
	5.2.3	TCP √ IP √ FTP √ SMTP √ Telnet √	(5)
	5.2.4	The topology is the physical layout of the computers in the network	(1)

	5.2.5	One of: Labelled drawing of a bus, star or ring topology √√√ Star Bus Ring 	(3)
5.3	5.3.1	Fibre optic cable should be used. √ It is fast and can cover long distances. √√	(3)
	5.3.2	One of: √ • Cheap • Easy to use • Fast enough for normal use (Any 1 x 1)	(1)
	5.3.3	One of: √ • Satellite • Microwave • Wi-max (Any 1 x 1)	(1)
5.4	5.4.1	Client-server. √ It is good for many machines whereas peer-to-peer is only good for up to 10 machines. √√	(3)
	5.4.2	Five of: √√√√√ • The clients do not need large disk capacity • More suitable for large numbers of computers • Faster performance • Security is good • Any other good reason (Any 5 x 1)	(5)

5.5	5.5.1	Multitasking is running more than program at once, like Word, Excel, Internet etc. Each program seems to have the processor dedicated to it. √√	(2)
	5.5.2	One of: √√ • Multithreading – an application splitting itself into different threads • Multiprocessing – more than one CPU. (Any 1 x 2)	(2)
	5.6.1	One is the uplink speed and the other the downlink √	(1)
	5.6.2	To prevent hackers and unwanted applications √ from accessing your network from the outside √ and to control what goes out of your network. √	(3)
	5.6.3	By blocking incoming √ and outgoing √ network ports	(2)
	5.7.1	Spam √	(1)
	5.7.2	No. √ It infringes on their rights, it is unethical. √	(2)
	5.7.3	Two of: √√√√ • On-screen keypad – keystrokes are easily captured, mouse clicks not. • Second, randomly changing password. • One-off passwords • Sms notifications. • Any other reasonable suggestion. (Any 2 x 2)	(4)
	5.7.4	Five of √√√ • Do not use public computers for banking • Use good passwords • Never give out personal details • Do not respond to emails requesting your details • Check bank statements • Ensure the bank site is secure (HTTPS) • Always access the bank by typing the full URL • Use anti-virus and firewall software • Do not leave the PC unattended. (Any 5 x 1)	(5)
	5.8.1	A virus is self-replicating √ executable code √ which copies itself onto machines with possible malicious intent. √	(3)

	5.8.2	Three of √√√ • E-mail • Infected flash disk • Malicious web sites • Malicious screen savers • Any other reasonable means (Any 3 x 1)	(3)
		TOTAL SECTION E:	**65**
		GRAND TOTAL:	**180**