GAUTENG DEPARTMENT OF EDUCATION

SENIOR CERTIFICATE EXAMINATION

COMPUTER STUDIES HG
(Second Paper: Theory)

QUESTION 1

BOOLEAN ALGEBRA

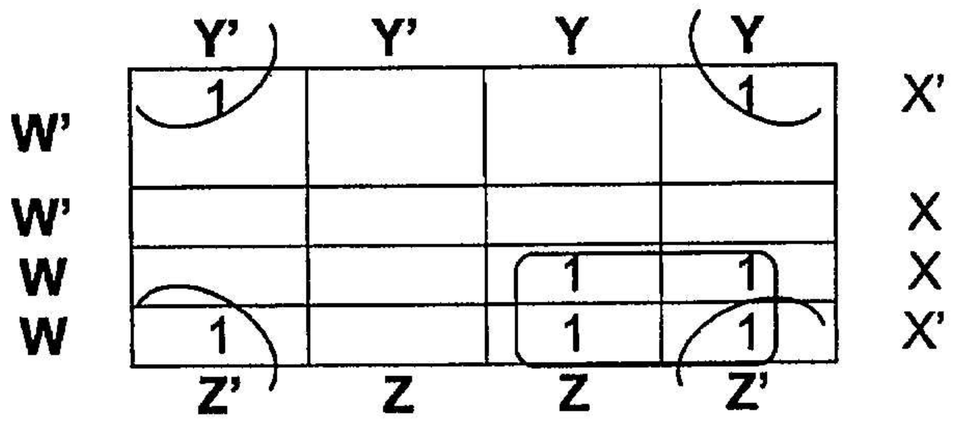
1.1 F(a,b,c,d) = bc(a + a') ✔ + c(d + 1) + d' ✔
= bc + c + d' ✔
= c(b + 1) + d' ✔
= c + d' ✔ (5)

1.2

W	X	Y	Z	F
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	1 ✔
1	0	1	1	1 ✔
1	1	0	0	0
1	1	0	1	0
1	1	1	0	1 ✔
1	1	1	1	1 ✔

✔ W,X,Y,Z-values (5)

1.3



Placement ✔ ✔
Grouping ✔
F(W,X,Y,Z) = WY ✔ +X'Z'(5) ✔ **[15]**

QUESTION 2

COMPUTER ARCHITECTURE

2.1.1 Pentium III, Celeron: 1.2 GHz, 1.1 GHz, 1.0 GHz, 866 MHz, 850 MHz, 800 MHz, 750 MHz, 733 MHz, 700 MHz, 667 MHz and 650 MHz
Pentium 4: 2.4 Ghz, 2.0 GHz, 1.9 Ghz, 1.8 GHz, 1.7 Ghz, 1.6 GHz, 1.5 GHz, 1.4 GHz and 1.3 GHz
AMD Athlon XP: .7 GHz, 1.8 GHz, 1.9 GHz,.., 2.2 GHz
AMD Duron: Tot 1.3 Ghz
Athlon MP: 1.5 GHz,1.6 GHz, 1.8 GHz, 1.9 GHz,.2.0 GHz, 2.1 GHz
Any one and speed ✔ ✔
2.1.2 256 / 512 RAM ✔
2.1.3 30 GB - 120 GB ✔ (4)

2.2.1 SDRAM – A clock is used to synchronize the memory with the CPU. ✔
DDR RAM – It doubles the data rate of the RAM because it can send twice in one clock tick. ✔ (2)
2.2.2 Access/transfer speed of memory is 133 MHz. ✔ (1)
2.2.3 RDRAM is much more expensive ✔ and not compatible with all motherboards. ✔ (2).
2.2.4 Access speed of RAM is much faster ✔ than secondary memory ✔ . OR More RAM allows more data and instructions to be loaded in RAM so that it is not necessary to use virtual memory. (2)
2.2.5 Solved with virtual memory ✔ . This type of memory uses space on the hard disk ✔ to enable the operating system to fool the computer and the user to think that more memory is available ✔ . (3)

2.3 Improves throughput. (In other words, improved external bus)

Improved memory on the video card.
Addition of processors to the video card for the processing of 2D and 3D graphics instructions. Any 2 ✔ ✔ (2)

2.4.1 A 3D-card fits to an APG slot ✔ . Ensure thus that the motherboard has one. ✔ (2)
2.4.2 Games, videos, CAD programs. Any 2. Speletjies, videos, CAD-programme. Any 2 ✔ ✔ (2)

2.5 Increasing the number of bytes that can be handled at any one time.
Increasing of the speed of processors
Cache memory
Pipe line processing
Changing of the basic instruction set
Improvement of the techniques used with the manufacturing of CPU chips Any 3 ✔ ✔ ✔ (3)

2.6 It enables devices to interrupt the CPU in order to transfer data to or from the CPU, or to control it.
A fault is detected on a device that is not busy with processing.
Any 2 ✔ ✔ (2)

2.7.1 USB ✔
2.7.2 Firewire ✔
2.7.3 SCSI ✔
2.7.4 pipe-line processing ✔
2.7.5 clock multiplication ✔
2.7.6 System clock ✔
2.7.7 Cache memory ✔
2.7.8 RISC ✔
2.7.9 SIMD ✔ /SSE/SSE2
2.7.10 PCI ✔

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QUESTION 3

SYSTEM SOFTWARE

3.1 Memory management ✔ – responsible for the application of memory and to ensure the programs have enough memory available. ✔
Process control ✔ – controls the allocation of adequate resources to each process/ program/ controls the logic sequence of execution of processes. ✔
Secondary memory management ✔ – tasks such as the creation, addition and storage of files are handled by the operating system. ✔
Control of input/output devices ✔ – the operating system is responsible to make the devices that uses and understands different commands transparent to both the user and the programmer. ✔
Function and description (8)

3.2 Is the computer fast enough? *Any 2* ✔ ✔ (2)
Ensure that your computer peripherals are compliant with the operating system.
Ensure your programs/ games works with the operating system.

3.3.1 A compacted file/ A file with its size reduced by Winzip ✔ (1)
3.3.2 You can store more data on a stiffy and hard drive.
Quicker transmission of data with email because the file is not so large.
Any 1 ✔ (1)
3.3.3 Date- and time of change
Number of the cluster where the file starts, type, size
Any 2 ✔ ✔ (2)

3.4 It appears as if the operating system executes more than one task ✔ at a time for instance listening to a CD while you are typing a Word document. *Any example* ✔ (2)

3.5.1 NTFS ✔
3.5.2 encryption ✔
3.5.3 passwords ✔
3.5.4 User accounts ✔ (4)

QUESTION 4
DATA COMMUNICATION

4.1.1 Star topology ✔ (1)
4.1.2 Network card ✔ & cables ✔ (2)
4.1.3 Different computers are linked to each other. ✔ (1)
4.1.4 Data is written to more than one hard disk ✔ to prevent data from being lost ✔ if one or more of the hard disks become faulty.(2)
4.1.5 Network server ✔ (1)
4.1.6 It is a server between the customer's application such as a browser and a file server. ✔ It executes tasks such as: ✔ Any task or example
Security reasons for example if someone want to break into your system
Provides better performance for access to the Internet. (2)
4.1.7 Regenerate signals
Amplify signals
Sends data only to the computer for whom it is meant/ Determines the best possible path. Any 2 ✔ ✔ (2)
4.1.8

Peer-to-peer	**Server supported**
All machines are equal and executes the same communication functions	Each computer in the network is either a client or a server
Software is cheap	Software is more expensive
No server required	A dedicated server required
Workstations have to be of a high standard	Workstations does not necessarily need large disk space or powerful processors
Can be installed by a person with little technical skills	Has to be installed by a person with a high level of technical skills.
Slow performance	Fast performance
Security is limited	Security is sophisticated
Small number of work stations	Can use a large number of work stations
Network operating system has to be installed on each computer	Network operating system has to be installed on server and client software on each computer.
Windows 95/98/2000/XP	Novelle, UNIX, Windows 2000/NT/XP

Any 3 differences ✔ ✔ ✔ (3)
4.1.9 router ✔ (1)

4.2.1 A dedicated ✔ digital line (1)
4.2.2 High quality data transfer
Cheaper than for example ISDN
Can transfer digital voice and video signals Any 2 ✔ ✔ (2)

4.3 Every machine on the Internet ✔ has a unique address, its Internet number or IP address ✔ .(2)

4.4.1 Switching determines how connections ✔ are made and how data flow is handled in a WAN ✔ . (2)

4.4.2 Messages are sent in smaller units namely packets. ✔
Does not necessarily follow the same route. ✔
Each packet is sent separately. ✔
When the all the packets arrive at their destination they are combined to form the original message. ✔ (4)

4.5 Inside a room for instance a television remote.
Send data to printer from a laptop.
Any example ✔ (1)

4.6.1 WAP ✔ / GPRS (1)

4.6.2 cell phone / pager smart phone / two-way radio
Any example ✔ (1)

4.7 It is a wireless ✔ network system based on very high frequency ✔ with a short operational distance that will ensure various electronic devices can communicate with each other ✔ without any form of physical connection.
(3)

4.8.1 ISDN – is an international communication standard to transfer voice, video and data ✔ via digital telephone lines ✔ .(2)

4.8.2 ADSL – It is a fast modem technology ✔ using twisted pair telephone lines and enables a normal telephone line to function as a multitask access ✔ medium. (2)

4.8.3 ATM – is a protocol ✔ developed from packet switching but it however uses cell switching. ✔ (2)

4.8.4 FDDI – is a LAN and MAN topology ✔ standard based on the use of fibre optical cables in a physical ring or star topology ✔ . OR It transmits data packets using light supplied by laser and uses a token passing media access method. (2)

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QUESTION 5
SOCIAL IMPLICATIONS

5.1.1 More people uses computers and the Internet
Large cost problem
All data stored electronically
Information is stolen and misused.
Any reason ✔ (1)

5.1.2 Firewalls are systems ✔ designed to prevent unauthorized access ✔ to or from a private network. (2)

5.1.3 Write and develop software and devices to prevent unwanted access.
Lost data must be recovered
Install software - time consuming
Any 1 ✔ (1)

5.2 Ensure there is a text description for each graphic.
Use simpler language.
Avoid flickering
Text must not be too small
Use sound
Contrast between colours.
Any 2 ✔ ✔ (2)

5.3 Banking services
Advertising on web page
Procurement
Sales to customers
Searching for information
Any 3 ✔ ✔ ✔ (3)

5.4 Privacy is the right of individuals to control information about themselves. People are worried about how the lack of computer security can influence their lives. Various departments have data bases with personal information that may be disclosed to others like in the named example.
Any 2 facts ✔ ✔ (2).

5.5.1 Persons need not carry cash with him
Person does not need to qualify to obtain a smart card.
Reduces the risk of robbery if dealers do not have a lot of cash with them.
Contains a micro processor can store additional data.
Can contain an access code.
Any 3 ✔ ✔ ✔ (3)

5.5.2 Biometry is the umbrella term for personal identification via the use of body features. ✔
Finger prints, analysis of signature/ Retina scanners/ Hand shape Any 2 examples ✔ ✔ (2)

5.5.3 Cost/ Requires a lot of specific devices to read ID-cards.
Any 1 ✔ (1)

5.6.1 Unwanted email. ✔ (1)
5.6.2 Do not open email
Do not open attachments, these can contain computer viruses.
Any 1 ✔ (1)

QUESTION 6

6.1.1 third = first + second OR third := CONAT(first,second); ✔ ✔ (2)
6.1.2 insert(character,characterstring,3); insert ✔ (character,characterstring,3); ✔ (2)
6.1.3 gotoxy ✔ (12,10) (1)/ floatToStrF ✔ (rNumber,ffFixed ✔ ,5,2 ✔) (3)
6.1.4 writeln(ord(character) ✔)(1) lblLet.Caption := IntToStr(ord(character));
6.1.5 first/second/third/characterstring ✔ := copy(characterstring,1,3) ✔ (2)
6.1.6 val(characterstring,integernumber,code) ✔ ✔ (2) strToInt( )
6.1.7 for k := 1 to length(characterstring) do ✔
characterstring[k] ✔ := upcase(characterstring[k]); ✔ (3)
/ characterstring := uppercase(characterstring); ✔ (1)
6.1.8 number := filesize(datafil); ✔ (1)
6.1.9 str(integernumber,stringvariable) ✔ (1) / intToStr(number)

6.2 1
2
3
4 ✔ ✔ (2)

6.3 Positive = 1..MAXINT ✔
Number = '0'..'9' ✔ (2)

6.4 Ordinary data types are data types with a specific sequence ✔ OR that which can be counted down for example CHAR, INTEGER, BYTE, WORD, LONGINT example ✔ (2)

6.5 John Basch ✔
Jeanne Louw ✔
Vanessa Smith ✔
Jimmy Brown ✔ (4)

6.6.1 Global: CHOICE/ACCOUNTTYPE ✔
Local: TEST/INPUTSTRING ✔ (2)
6.6.2 Clears a line ✔ from the position of the marker.(1)
ShowMessage
6.6.3 TEST := upcase(INVP) **in** ✔ ['T','S','L'];(1)
6.6.4 TESTVALID := TEST; ✔ (1)

QUESTION 7

7.1 D ✔ ✔ D
7.2 C ✔ ✔ C
7.3 F ✔ ✔ A
7.4 B ✔ ✔ F
7.5 E ✔ ✔ J (10)

QUESTION 8

8.1 tab stops ✔
lines are skipped ✔ (2)
8.2 GAAAAA ✔ ✔ (2)
8.3 A ✔ , B ✔ , D ✔ , E ✔ (4)
8.4 GABCDE ✔ ✔ (2)

QUESTION 9

9.1 assign*File*(**textfil,'NAME2.TXT'** ✔);/ assign*File*(datafil,'INFO.DAT');
9.2 reset(**textfil** ✔);
9.3 assign*File*(**datafil,'INFO.DAT** ✔ '); / assign*File*(teksler,'NAME2.TXT')
9.4 rewrite(**datafil** ✔);
9.5 while not eof(**textfil** ✔) do
9.6 readln(**textfil,line** ✔);
9.7 place := pos(',',**line** ✔);
9.8 person.name:= copy(**line,1,place-1)** ✔ ;
9.9 delete(**line,1,place)** ✔ ;
9.10 write(**datafil,person**); ✔ (10)

QUESTION 10

```
procedure largesmall(lcharstring:string ✔ ;var llarge, lsmall :char ✔ );
var
    k:integer; ✔
begin
   lsmall := lcharstring[1]; ✔
   llarge := lcharstring[1]; ✔
   for k := 2 to length(lcharstring) ✔ do
    begin
     if lcharstring[k] > llarge ✔ then llarge :=
                                          lcharstring[k]; ✔
     if lcharstring[k] < lsmall ✔ then lsmall :=
                                          lcharstring[k]; ✔
    end;
end;(10)
```

GAUTENGSE DEPARTEMENT VAN ONDERWYS

SENIORSERTIFIKAAT-EKSAMEN

REKENAARSTUDIE HG
(Tweede Vraestel: Teorie)

VRAAG 1
BOOLE-ALGEBRA

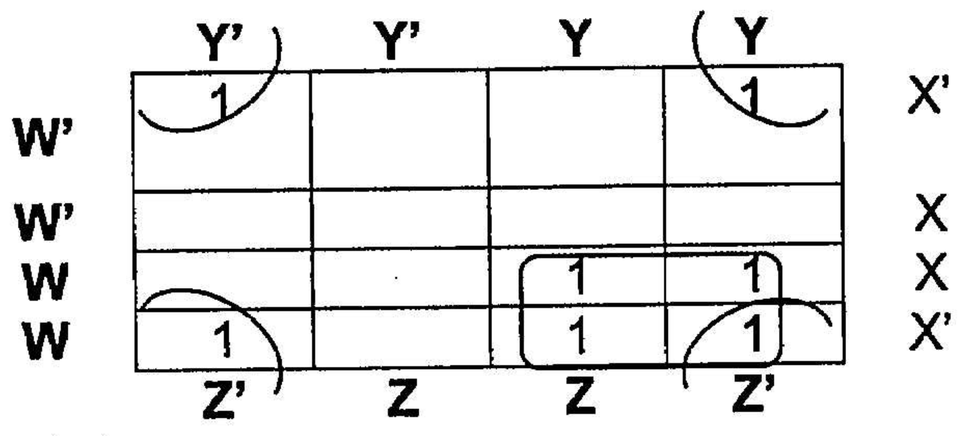
1.1 F(a,b,c,d) = bc(a + a') ✔ + c(d + 1) + d' ✔
= bc + c + d' ✔
= c(b + 1) + d' ✔
= c + d' ✔ (5)

1.2

W	X	Y	Z	F
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	1 ✔
1	0	1	1	1 ✔
1	1	0	0	0
1	1	0	1	0
1	1	1	0	1 ✔
1	1	1	1	1 ✔

✔ W,X,Y,Z-waardes (5)

1.3



Plasing ✔ ✔
Groepering ✔
F(W,X,Y,Z) = WY ✔ +X'Z'(5) ✔ **[15]**

VRAAG 2

REKENAARARGITEKTUUR

2.1.1 Pentium III, Celeron: 1.2 GHz, 1.1 GHz, 1.0 GHz, 866 MHz, 850 MHz, 800 MHz, 750 MHz, 733 MHz, 700 MHz, 667 MHz en 650 MHz
Pentium 4: 2.4 Ghz, 2.0 GHz, 1.9 Ghz, 1.8 GHz, 1.7 Ghz, 1.6 GHz, 1.5 GHz, 1.4 GHz en 1.3 GHz
AMD Athlon XP: .7 GHz, 1.8 GHz, 1.9 GHz,.., 2.2 GHz
AMD Duron: Tot 1.3 Ghz
Athlon MP: 1.5 GHz,1.6 GHz, 1.8 GHz, 1.9 GHz,.2.0 GHz, 2.1 GHz
Enige een & spoed ✔ ✔

2.1.2 256 / 512 RAM ✔

2.1.3 30 GB - 120 GB ✔ (4)

2.2.1 SDRAM – 'n Klok word gebruik om die geheue met die SVE te sinchroniseer. ✔
DDR RAM – Dit verdubbel die datatempo van die RAM omdat dit twee keer elke klokpuls kan stuur. ✔ (2)

2.2.2 Toegang/oordrag-spoed van geheue is 133 MHz. ✔ (1)

2.2.3 RDRAM is baie duurder ✔ en nie versoenbaar met enige moederbord nie ✔ (2).

2.2.4 Toegangspoed van RAM is baie vinniger ✔ as sekondêre geheue ✔ . OF Meer RAM veroorsaak dat meer data en instruksies in die RAM gelaai word en dat dit nie nodig is om van virtuele geheue gebruik te maak nie. (2)

2.2.5 Word opgelos met virtuele geheue ✔ . Hierdie tipe geheue maak van spasie op die hardeskyf ✔ gebruik om die bedryfstelsel in staat te stel om die rekenaar en die gebruiker te flous en te laat dink dat daar meer geheue beskikbaar is. ✔ (3)

2.3 Verbeterde deurvoer (d.w.s. verbeterde eksterne bus)

Verbeterde geheue op die videokaart
Byvoeging van verwerkers by die videokaart vir die verwerking van 2D- of 3D- grafika-instruksies. Enige 2 ✔ ✔ (2)

2.4.1 'n 3D-kaart pas in 'n AGP gleuf ✔ . Maak dus seker dat die moederbord een het ✔ .(2)

2.4.2 Speletjies, videos, CAD-programme. Enige 2 ✔ ✔ (2)

2.5 Vermeerdering van die aantal bisse wat op 'n slag hanteer kan word
Verhoging van die spoed van verwerkers
Kasgeheue
Pyplynverwerking
Verandering in die basiese instruksiestel
Verbetering in die tegnieke wat gebruik word by die vervaardiging van SVE-vlokkies.
Enige 3 ✔ ✔ ✔ (3)

2.6 Dit stel randapparatuur in staat om die SVE te onderbreek sodat dit óf data daarheen / daarvandaan kan oordra, óf dit kan beheer
'n Fout is opgespoor op 'n toestel wat nie met verwerking besig is nie.
Enige 2 ✔ ✔ (2)

2.7.1 USB ✔
2.7.2 Firewire ✔
2.7.3 SCSI ✔
2.7.4 Pyplynverwerking ✔
2.7.5 Klokvermenigvuldiging ✔
2.7.6 Stelselklok ✔
2.7.7 Kasgeheue ✔
2.7.8 RISC ✔
2.7.9 SIMD ✔ /SSE/SSE2
2.7.10 PCI ✔

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VRAAG 3

STELSELPROGRAMMATUUR

3.1 Geheuebestuur ✔ – is verantwoordelik vir die toekenning van geheue en te sorg dat programme genoeg geheue tot hulle beskikking het. ✔
Prosesbeheer ✔ – kontroleer dat elke proses/program genoeg hulpbronne ontvang / kontroleer dat prosesse in logiese volgorde gedoen word ✔
Sekondêre geheuebestuur ✔ – take soos die skep, bywerking en stoor van lêers word deur die bedryfstelsel hanteer. ✔
Beheer van toevoer/afvoertoestelle ✔ – die bedryfstelsel is verantwoordelik om die toestelle wat verskillende bevele gebruik en verstaan, deursigtig vir die gebruiker en programmeerder te maak. ✔
Funksie & beskrywing (8)

3.2 Is die verwerker van die rekenaar vinnig genoeg? Enige 2 ✔ ✔ (2)
Maak seker dat jou rekenaar se apparatuur versoenbaar is met die bedryfstelsel.

Maak seker dat jou programme / speletjies werk met bedryfstelsel.

3.3.1 'n Lêer wat gekompakteer is. ✔ / 'n Lêer wat deur Winzip kleiner gemaak is.(1)
3.3.2 Jy kan data om 'n stiffie of hardeskyf stoor.
Data word vinniger gestuur met e-pos omdat die lêer nie so groot is nie.
Enige 1 ✔ (1)
3.3.3 Datum- en tyd van verandering, grootte entipelêer
Nommer van die kluster waar die lêer begin
Enige 2 ✔ ✔ (2)

3.4 Dit wil voorkom of die bedryfstelsel meer as een taak ✔ op 'n slag verrig bv. luister na 'n CD terwyl jy 'n Word-dokument tik.
Enige voorbeeld ✔ (2)

3.5.1 NTFS ✔
3.5.2 enkripsie ✔
3.5.3 Gebruikersrekeninge (user accounts) ✔
3.5.4 wagwoorde ✔ (4)

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VRAAG 4
DATAKOMMUNIKASIE

4.1.1 Ster-topologie ✔ (1)
4.1.2 Netwerkkaart ✔ & kabels ✔ (2)
4.1.3 Verskillende rekenaars word aanmekaar gekoppel ✔ (1)
4.1.4 Data word na meer as een hardeskyf ✔ geskryf sodat data nie verlore gaan ✔ as een of meer van die hardeskywe foutief raak nie.(2)
4.1.5 Netwerkbediener ✔ (1)
4.1.6 Dit is 'n bediener wat tussen 'n kliënt se toepassing soos 'n deurblaaier en 'n lêerbediener voorkom ✔ . Dit voer take uit soos ✔ *Enige taak of voorbeeld*
sekuriteitredes bv. as iemand in jou stelsel wil inbreek
Lewer beter werkverrigting vir toegang tot Internet (2)
4.1.7 Hergenereer seine
Versterk seine
Stuur slegs die data na die rekenaar waarvoor dit bedoel is / Bepaal die beste moontlike pad. *Enige 2* ✔ ✔ (2)
4.1.8

Eweknie	**Bedienergesteunde**
Alle masjiene is eweknie en verrig dieselfde kommunikasiefunksies	Elke rekenaar in die netwerk is óf kliënt of bediener
Programmatuur is goedkoop	Programmatuur is duurder
Geen bediener is nodig nie	'n Toegewysde bediener is nodig
Werkstasies moet van hoë standaard wees	Werkstasies het nie noodwendig groot skyfkapasiteit en kragtige verwerkers nodig nie
Kan geïnstalleer word deur 'n persoon met min tegniese vaardighede	Moet geïnstaleer word deur 'n persoon met hoë tegniese vaardighede
Stadige werkverrigting	Vinnige werkverrigting
Sekuriteit is beperk	Sekuriteit is gesofistikeerd
Klein aantal werkstasies	Kan groot aantal werkstasies gebruik
Netwerkbedryfstelsel moet op elke rekenaar gelaai word	Netwerkbedryfstelsel word op bediener gelaai en die kliëntprogrammatuur op elke rekenaar.
Windows 95/98/2000/XP	Novelle, UNIX, Windows 2000/NT/XP

Enige 3 verskille ✔ ✔ ✔ (3)
4.1.9 roeteerder ✔ (1)
4.2.1 'n Toegewysde ✔ digitale lyn (1)
4.2.2 Hoë-kwaliteit data-oordrag
Goedkoper as bv. ISDN
Kan digitale spraak en videoseine oordra
Enige 2 ✔ ✔ (2)

4.3 Elke masjien op die Internet ✔ het 'n unieke adres, sy Internetnommer of IP-adres ✔ .(2)

4.4.1 Skakeling bepaal hoe konneksies gemaak word ✔ en hoe datavloei in 'n WAN ✔ hanteer word.(2)

4.4.2 Boodskappe word in kleiner eenhede gestuur nl. pakkies ✔
Volg nie noodwendig dieselfde roete nie ✔
Elke pakkie word afsonderlik versend ✔
Wanneer al die pakkies by die bestemming kom word hulle saamgevoeg om die oorspronklike boodskap te vorm. ✔ (4)

4.5 Binne 'n vertrek bv. televisiekontrole
Stuur data na drukker vanaf laptop
Enige voorbeeld ✔ (1)

4.6.1 WAP ✔ / GPRS (1)

4.6.2 selfoon / pager smartphone / tweerigtingradio
Enige voorbeeld ✔ (1)

4.7 Dit is 'n draadlose ✔ netwerkstelsel wat gebaseer is op baie hoë frekwensie ✔ met 'n kort reikafstand wat sal maak dat verskeie elektroniese toestelle met mekaar kan kommunikeer ✔ sonder enige vorm van fisiese verbinding.(3)

4.8.1 ISDN – is 'n internasionale kommunikasiestandaard om stem, video en data ✔ oor digitale telefoonlyne ✔ te versend.(2)

4.8.2 ADSL – Dit is 'n vinnige modemtegnologie ✔ wat gedraaide-paar telefoonlyne gebruik en 'n normale telefoonlyn as 'n multitaak-toegangsmedium ✔ laat funksioneer.(2)

4.8.3 ATM – is 'n protokol ✔ wat uit pakkieskakeling ontwerp is maar wat van selskakeling ✔ gebruik maak.(2)

4.8.4 FDDI – is 'n standaard vir LAN- en MAN-topologie ✔ en word gebruik met veseloptiese kabels in 'n fisiese ring of ster-topologie ✔ (2) OF
Dit versend datapakkies m.b.v lig deur 'n laser verskaf en gebruik tekenaanstuur-toegangsmetode.

[40]

VRAAG 5
SOSIALE IMPLIKASIES

5.1.1 Meer mense gebruik rekenaars en Internet
Groot koste-probleem
Alle data word elektronies gestoor
Inligting word gesteel en wangebruik
Enige rede ✔ (1)

5.1.2 Firewalls is stelsels ✔ wat ontwerp is om ongemagtigde toegang ✔ tot of vanaf 'n private netwerk te voorkom.(2)

5.1.3 Skryf en ontwikkeling van programmatuur en apparatuur om ongewenste indringing te voorkom.
Verlore data moet herwin word
Sagteware moet weer geinstalleer word - tydrowend
Enige 1 ✔ (1)

5.2 Verseker vir elke grafika is daar 'n teksbeskrywing
Gebuik eenvoudige taal
Vermy flikkering
Skrif moet nie te klein wees nie
Gebruik klank
Kontras tussen kleure *Enige 2* ✔ ✔ (2)

5.3 Bankdienste
Advertering op webblad
Aankope
Verkope aan kliënte
Soek na inligting
Enige 3 ✔ ✔ ✔ (3)

5.4 Privaatheid is die reg van individue om inligting oor hulself te beheer. Mense is bekommerd oor hoe die gebrek aan rekenaarsekerheid hulle lewens kan beïnvloed. Verskeie departemente beskik oor databasisse met persoonlike inligting wat dalk bekend gemaak kan word aan ander soos die genoemde voorbeeld.
Enige 2 feite ✔ ✔ (2).

5.5.1 Persoon hoef nie kontant by hom te dra nie.
Persoon hoef nie eers te kwalifiseer om 'n slimkaart te kan bekom nie
'n Persoon kan nie oorspandeer nie
Verminder die risiko van rooftogte was handelaars nie baie kontant by hulle het nie
Bevat 'n mikroverwerker en kan addisionele data stoor
Kan 'n toegangskode bevat
Enige 3 ✔ ✔ ✔ (3)

5.5.2 Biometrie is die oorkoepelende term vir persoonlike identifikasie deur gebruik te maak van persoonlike voorkoms ✔ . Vingerafdrukke, ontleding van handtekening / Retina aftasters / Handvorm *Enige 2 voorbeelde* ✔ ✔ (2)

5.5.3 Koste / Moet spesifieke apparatuur hê om ID-kaarte te lees
Enige 1 ✔ (1)

5.6.1 Ongewenste e-pos. ✔ (1)
5.6.2 Moenie enige e-pos oopmaak nie
Moenie enige aanhegsels oopmaak nie, dit kan 'n rekenaarvirus bevat.
Enige 1 ✔ (1)

VRAAG 6

TURBO PASCAL

6.1.1 derde := eerste + tweede; ✔ ✔ (2) OF derde := CONCAT(eerste,tweede);
6.1.2 insert✔ (karakter,karstr,3); ✔ (2)
6.1.3 gotoxy✔ (12,10) (1) / floatToStrF✔ (rgetal,ffFixed✔,5,2✔) (3)
6.1.4 writeln(ord(karakter) ✔) / lblLet.Caption := IntToStr(ord(karakter)); (1)
6.1.5 eerste/tweede/derde/karstr ✔ := copy(karstr,1,3) ✔ (2)
6.1.6 val(karstr,heelgetal,kode) ✔ ✔ (2) / strToInt( )
6.1.7 for k := 1 to length(karstr) do✔
karstr[k] ✔ := upcase(karstr[k]); ✔ (3) / karstr := uppercase(karstr); ✔ (1)
6.1.8 aantal := filesize(dataler); ✔ (1)
6.1.9 str(heelgetal,karstr) ✔ (1) intToStr(aantal)

6.2 1
2
3
4✔ ✔ (2)

6.3 Positief = 1..MAXINT✔
Aantal = '0'..'9' ✔ (2)

6.4 Ordinale datatipes is datatipes wat 'n bepaalde volgorde✔ het OF wat aftelbaar is bv.
CHAR, INTEGER, BYTE, WORD, LONGINT voorbeeld ✔ (2)

6.5

John	Basch ✔
Jeanne	Louw ✔
Vanessa	Smith ✔
Jimmy	Brown ✔ (4)

6.6.1 Globaal: KEUSE/REKEINGTIPE✔
Lokaal: TOETS/INVOERSTRING✔ (2)
6.6.2 Maak 'n lyntjie skoon ✔ vanwaar die merker geplaas is(1)
ShowMessage
6.6.3 TOETS := upcase(INVOER) IN ✔ ['T','S','L'];(1)
6.6.4 TOETSGELDIG := TOETS; ✔ (1)

[30]

VRAAG 7

7.1 D✔ ✔D
7.2 C✔ ✔C
7.3 F✔ ✔A
7.4 B✔ ✔F
7.5 E✔ ✔ J(10)

[10]

VRAAG 8

8.1 Inkepings ✔
Lyntjies ooplaat ✔ (2)
8.2 GAAAAA ✔ ✔ (2)
8.3 A ✔ , B ✔ , D ✔ , E ✔ (4)
8.4 GABCDE ✔ ✔ (2)

[10]

VRAAG 9

```
9.1   assignFile(teksler,'nAME2.TXT' ✔ );/ assignFile(dataler,'INLIGT.DAT');
9.2   reset(teksler ✔ );
9.3   assignFile(dataler,'INLIGT.DAT ✔ '); / assignFile(teksler,'nAME2.TXT')
9.4   rewrite(dataler ✔ );
9.5   while not eof(teksler ✔ ) do
9.6   readln(teksler,lyn ✔ );
9.7   plek := pos(',',lyn ✔ );
9.8   persoon.naam:= copy(lyn,1,plek-1) ✔ ;
9.9   delete(lyn,1,plek) ✔ ;
9.10  write(dataler,persoon); ✔ (10)
```

[10]

VRAAG 10

```
procedure grootklein(gkarstring:string ✔ ;var ggroot, gklein :char ✔ );
var
    k:integer; ✔
begin
   gklein := gkarstring[1]; ✔
   ggroot := gkarstring[1]; ✔
   for k := 2 to length(gkarstring) ✔ do
    begin
      if gkarstring[k] > ggroot ✔ then ggroot :=
                                        gkarstring[k]; ✔
      if gkarstring[k] < gklein ✔ then gklein :=
                                        gkarstring[k]; ✔
    end;
end;
```

[10]

Exam number:	Marker:

COMPUTER STUDIES SG PRACTICAL MARKSHEETS 2004

VRAAG 1/QUESTION 1 (Woordverwerkingslêer **XSAMENXX** / WP file **EXAMXX**)

Heading Bold, ✓	centre, ✓	insert line✓		3	
EXAMINATION INSTRUCTIONS EKSAMEN INSTRUKSIES		underline✓		1	
Insert: A Practical...(the whole sentence)✓		2½✓		2	
Move : [PRACTICAL PAPER] [PRAKTIESE VRAESTEL]✓				1	
TOPIC left align✓		1.5 cm✓**(not more than 0.05 cm out)**		4	
MARKS right align✓		13cm✓			
Architecture: Argitektuur one word✓		Datacommunications Datakommunikasies : remove **s**✓		2	
Bullets✓**(must be under the text – Turbo)**		Indentation ✓		2	
Analysis. Of Grade 11/ Ontleding van graad 11 **Font size - 14**✓				1	
Table Insert ✓ **Arial 14pt**✓	Italic ✓	Marks / Punte **right align**✓	<u>300</u> **underline**✓	5	
Header : examination number / eksamennommer✓				4	
Footer: current date✓✓		right align✓			
margins : R + L 3 cm✓✓		T + B 2 cm✓✓		4	
Line spacing 1.5✓✓ **(the whole document)**				2	
Page border✓✓				2	
Remove page break✓ **(totally)**				1	
TOTAL				**34**	

VRAAG 2/QUESTION 2 (Wverwerkingsdokument: **ENTREPXX** / WP file **ENTREPXX**)

Insert picture ✓**(any picture)**	1	
Information: date, stalls, number, venue, time, kontact number datum, stalletjies, nommers, plek, tyd. kontaknommer ✓✓✓ **-1 per error**	3	
Font size✓, font type✓, Wordart✓, Align✓,Colour ✓	5	
A5✓	1	
TOTAL	**10**	

VRAAG 4.2/QUESTION 4.2 (Woordverwerkingsdokument: **BIOLXX** / WP file **BIOLXX**)

Graph ✓✓	2	
Heading: REPORT/VERSLAG..✓ Full A4✓ Landscape ✓ Header: Examination number✓	4	
TOTAL	**6**	

Exam number:	Marker:

VRAAG 3/QUESTION 3: (Sigbladlêer **PUNTEXX)** (Spreadsheet file **MARKSXX)**

Columns legible✓	headings bold✓,	double✓ frame✓	4	
Heading ✓ bigger font size ✓ centre ✓ text wrap ✓			4	
Sort alphabetically ✓	All columns sorted ✓		2	
Column F :=Average✓(B3 :E3) ✓	1dec ✓		3	
Average: = Average✓ (B3:B20) ✓	4 columns✓		3	
Highest: MAX✓(F3:F20) ✓	–1 if not only in column F		2	
2nd highest: LARGE ✓ (F3:F20,2) ✓			2	
Number of learners: COUNT✓ (F3:F20) ✓ (any column, not only F; COUNTA for column A)			2	
Column G : =IF✓F3>79✓,"A"✓,IF✓ (F3>69✓,"B"✓,"C"✓))			7	
Footer✓ : =NOW() or DATE() or [Date] ✓	centre✓		3	
Header : examination number✓			1	
TOTAL:			**33**	

VRAAG 4/QUESTION 4 (Spreadsheet file **MARKSXX** / Sigbladlêer **PUNTEXX)**

Balkgrafiek ✓	Termyn 2 + 3✓	2	
Heading: BIOLOGY..✓	X as: NAME✓ Y axis: MARK✓	5	
Scale: 25✓	Series✓		
Pie Chart✓ correct data ✓		2	
Heading: SYMBOL DISTRIBUTION (SIMBOOLVERSPREIDING)✓ **Show:** %✓ symbols (legend or label)✓		3	
TOTAL:		**12**	

QUESTION 5 (Spreadsheet file **MARKSXX**, sheet **NEW/** Sigbladlêer **PUNTEXX,** sheet **NUWE)**

Create (–1 per error : separate spreadsheet, wrong/extra columns ✓ Label new sheet as **NEW (NUWE)**	2	
Heading: GRADE 11..✓	1	
COLUMN F: =(B3✓+average(c3:e3) ✓)/2✓; –1 if not rounded off	3	
TOTAL:	**6**	

QUESTION 7/VRAAG 7 (Spreadsheet **BOYSXX** / Sigblad **SEUNSXX)**

Heading: GRADE 8 BOYS ✓ SURNAME , NAME , BIRTHDATE ✓	2	
Copy data correct (–1 per error : wrong record; wrong column; extra column)	3	
E1: 05/01/01 (type YY/MM/DD) ✓	1	
Column D: = INT✓ ((E - C3) ✓/365) ✓	3	
TOTAL:	**9**	

Exam number:	Marker:

QUESTION 6/VRAAG 6 (Database file **GRADE8**/Databasislêer **GRAAD8**)

TABEL LEERDERS..		
Rename Table: LEARNERSXX✓**/LEERDERSXX**	1	
Add: SMITH,JANSEN✓✓	2	
Primary key✓✓	2	
REGISTRATION: Currency✓✓	2	
DATE OF BIRTH: Type DATE✓Type data✓	2	
Delete OPPERMAN✓ **If more fields deleted no marks**	1	
SEX: Validation test M OR F✓✓ **(M or V)** Text message ✓✓	4	
QUERY SCHOOL..		
Sort alphabetically✓✓	2	
SEX = F ✓*AND*✓ SCHOOL = LINBURG✓ OR✓ SEX = F *AND* SCHOOL = AMASIA✓ **OR** LINBURG OR AMASIA *AND* SEX = F	5	
Columns: SURNAME, NAME✓✓**-1 for extra fields**	2	
QUERY REGIS..		
Column heading: AMOUNT OWING✓	1	
AMOUNT OWING: ✓ 400-✓ [REGISTRATION] ✓	3	
Display: SURNAME , NAME	1	
Report GROUPS..		
Heading: GRADE 8 LEARNERS✓**,centre**✓ Columns: SURNAME, NAME, SEX, PRIMARY SCHOOL✓✓ - **-1 for extra fields.** (order of fields not important)	2 2	
Group by sex✓✓ Separate pages✓✓	4	
Formula =COUNTA([VAN])✓ , Count by group (separate) ✓ Caption ✓	3	
Page footer: Examination number	1	
TOTAL :	**40**	

Package	MSOFFICE 97 / 2000 / XP
BACKUPS in Box	YES/NO
Word Q1,2	
Spreadsheet Q 3,4,5,7	
Database Q 6	
Controlled by Controller	
Controlled by CM	