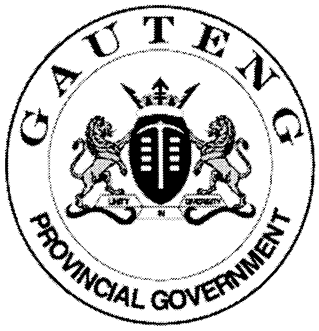
SENIOR CERTIFICATE EXAMINATION
SENIORSERTIFIKAAT-EKSAMEN



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2005

COMPUTER STUDIES

REKENAARSTUDIE

(Second Paper: Theory)
(Tweede Vraestel: Teorie)

SG **724-2/2**

14 pages
14 bladsye

COMPUTER STUDIES SG: Paper 2
Theory

724 2 2 SG

X05

GAUTENGSE DEPARTEMENT VAN ONDERWYS

SENIORSERTIFIKAAT-EKSAMEN

REKENAARSTUDIE SG
(Tweede Vraestel: Teorie)

TYD: 3 uur

PUNTE: 150

INSTRUKSIES:

- Beantwood AL die vrae.
- Hierdie vraestel bestaan uit 14 bladsye. Maak asseblief seker dat jou vraestel volledig is.

GAUTENG DEPARTMENT OF EDUCATION

SENIOR CERTIFICATE EXAMINATION

COMPUTER STUDIES SG
(Second Paper: Theory)

TIME: 3 hours

MARKS: 150

INSTRUCTIONS:

- Answer ALL the questions.
- This paper consists of 14 pages. Please check that your paper is complete.

VRAAG 1
REKENAARARGITEKTUUR

1.1 Die diagram hieronder stel die hoofkomponente van 'n rekenaar voor, en sommige voorbeelde word verskaf. Gee verdere voorbeelde om die volgende te voltooi:

1.1.1 _____ (A3)

1.1.2 _____ (B3)

1.1.3 _____ (B4)

1.1.4 _____ (C2)

1.1.5 _____ (C3)

1.1.6 _____ (D2) (6)

1.2 Wat is die funksie van komponent **A** (geheue)? (1)

QUESTION 1
COMPUTER ARCHITECTURE

1.1 The diagram below shows the main components of a computer, with some examples provided. Give further examples to complete the following:

1.1.1 _____ (A3)

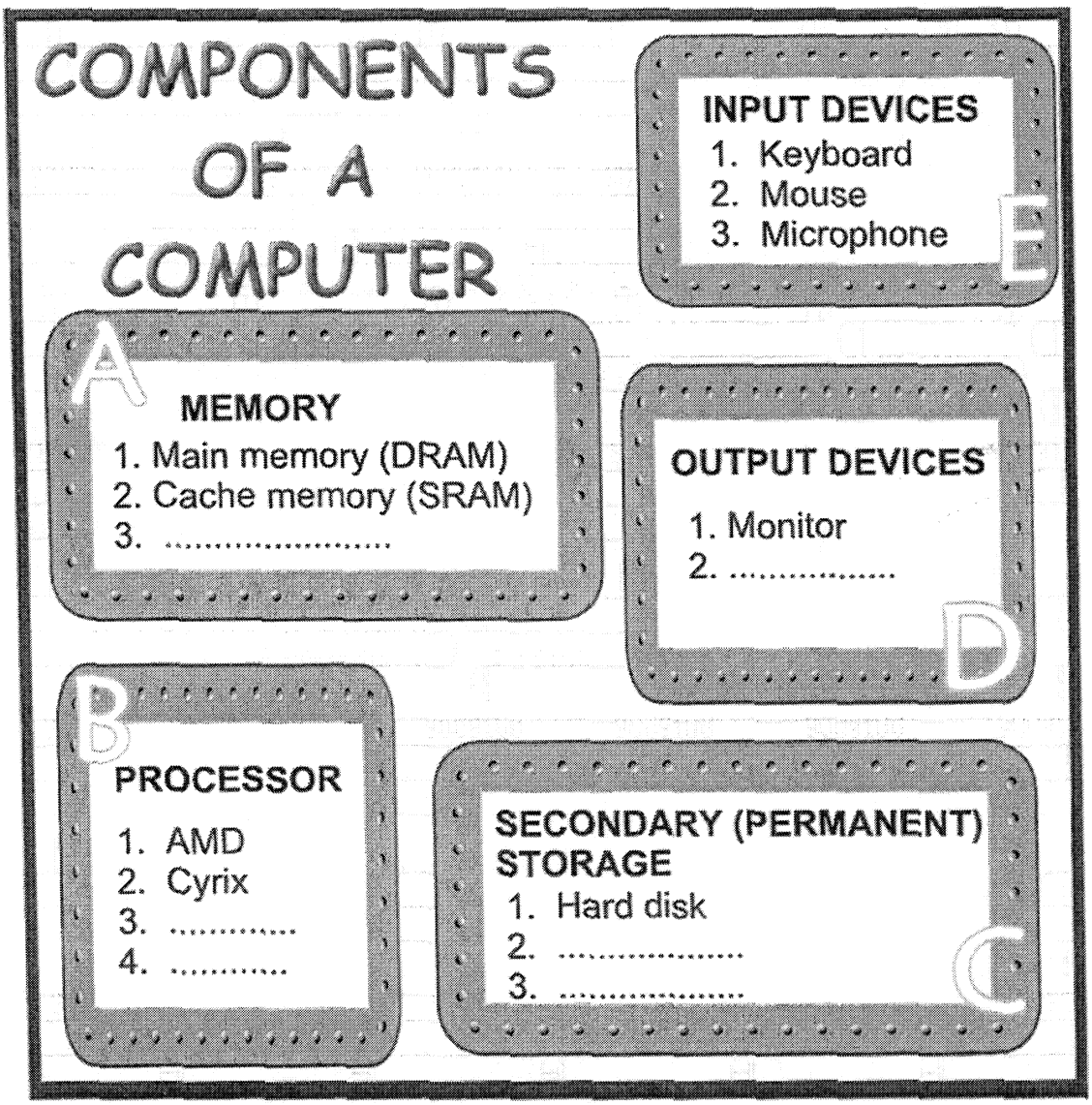
1.1.2 _____ (B3)

1.1.3 _____ (B4)

1.1.4 _____ (C2)

1.1.5 _____ (C3)

1.1.6 _____ (D2) (6)



1.2 What is the function of component **A** (memory)? (1)

1.3 Pas elkeen van die sinne hieronder by een van die komponente **A**, **B**, **C**, **D** of **E** soos op bladsy 3 gewys. Skryf slegs die vraagnommer en die korrekte letter neer.

1.3.1 Hierdie komponent werk teen 'n vinniger spoed as die spoed van die stelselklok.

1.3.2 Hierdie komponent bevat die bedryfstelsel wanneer die rekenaar afgeskakel is.

1.3.3 Wiskundige berekeninge word deur hierdie komponent gedoen (bv. wanneer die gebruiker met Windows Calculator werk).

1.3.4 Die rekenaar word stadiger wanneer hierdie komponent vol raak.

1.3.5 Hierdie komponent gebruik die pyplyn-tegniek ("pipelining").

1.3.6 Hierdie komponent word gebruik vir die stoorarea van die "spooler".

1.3.7 Hierdie komponent word gebruik vir die buffer. (7)

1.4 Skryf slegs die ontbrekende woorde neer:

1.4.1 Die _____ bus is verantwoordelik vir die oordrag van data tussen komponente **A** en **B**.

1.4.2 Die _____ bus is verantwoordelik vir die oordrag van data tussen komponente **B** en **D**. (2)

1.5 Waar in die rekenaar word die BIOS ("Basic Input Output System") gestoor? (1)

1.6 Wat is die funksie van die beheerbus? (2)

1.7 1.7.1 Noem TWEE hardeskyf-beheerders.

1.7.2 Wat is die funksie van 'n hardeskyf-beheerder? (3)

1.8 Die MMX-instruksiestel maak gebruik van 'n metode wat SIMD genoem word.

1.8.1 Verduidelik hoe hierdie metode werk. (2)

1.8.2 Noem een spesifieke voordeel daaraan verbonde om 'n MMX instruksie-stel te hê. (Dit is nie voldoende om te sê dat die rekenaar vinniger of beter werk nie.) (1)

1.9 1.9.1 Watter een sal jy kies: 'n interne modem of 'n eksterne modem? Gee 'n rede vir jou antwoord. (1)

1.9.2 In watter gleuf op die moederbord kan die interne modem ingeprop word? (1)

1.10 Skryf DRIE eienskappe van die "Universal Serial Bus (USB)" neer. (3)

[30]

1.3 Match each of the sentences below with one of the components **A**, **B**, **C**, **D** or **E** shown on page 3. Write only the question number and the correct letter.

1.3.1 This component works at a faster speed than the speed of the system clock.

1.3.2 This component contains the operating system when the computer is switched off.

1.3.3 Arithmetic operations are done by this component (for example, when a user is working with Windows Calculator).

1.3.4 The computer becomes slower when this component gets full.

1.3.5 This component uses pipelining.

1.3.6 This component is used for the storage area of the spooler.

1.3.7 This component is used for the buffer. (7)

1.4 Write down only the missing words:

1.4.1 The _____ bus is responsible for transfer of data between components **A** and **B**.

1.4.2 The _____ bus is responsible for transfer of data between components **B** and **D**. (2)

1.5 Where in the computer is the BIOS (Basic Input Output System) stored? (1)

1.6 What is the function of the control bus? (2)

1.7 1.7.1 Name TWO hard drive controllers.

1.7.2 What is the function of a hard drive controller? (3)

1.8 The MMX instruction set makes use of a method called SIMD.

1.8.1 Explain how this method works. (2)

1.8.2 Name one specific advantage that we gain by having an MMX instruction set. (It is not sufficient to say that the computer works faster or better.) (1)

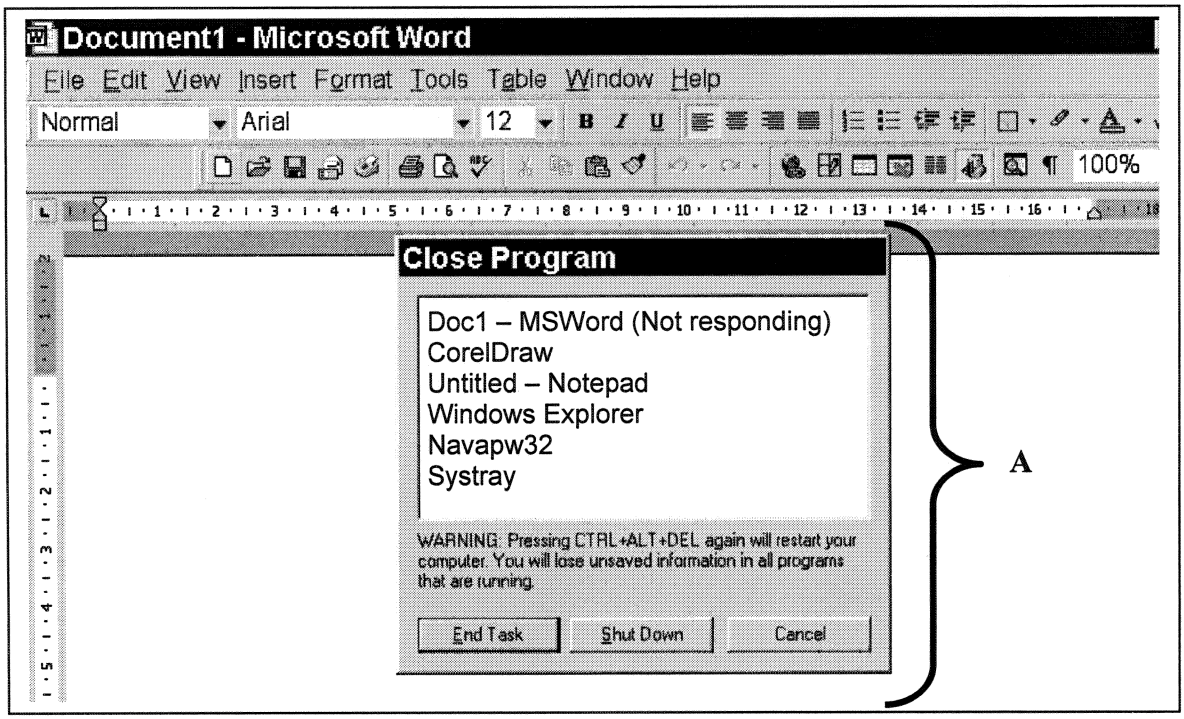
1.9 1.9.1 Which one would you choose: an internal modem or an external modem? Give a reason for your answer. (1)

1.9.2 Which slot on the motherboard does an internal modem plug into? (1)

1.10 Write down THREE features of the Universal Serial Bus (USB). (3)

[30]

VRAAG 2
STELSELPROGRAMMATUUR



2.1 Die area wat **A** gemerk is (ook 'n "task list" genoem) vertoon 'n lys van al die programme wat tans op die rekenaar uitgevoer word. Vir elk van die volgende sinne, kies die korrekte opsie om die sin te voltooi. Skryf slegs die vraagnommer en die letter neer, bv. 1.2.5 C.

2.1.1 Die feit dat verskeie programme terselfdertyd uitgevoer word, beteken dat _____.

A. hierdie rekenaar aan 'n netwerk verbind is

B. die bedryfstelsel op hierdie rekenaar 'n multi-taakstelsel ("multi-tasking system") is

C. hierdie stelsel word gebruik vir tyddeling ("time-sharing")

D. meer as een persoon hierdie rekenaar gebruik

2.1.2 Langs MSWord in hakies is die woorde "not responding" (reageer nie) . Dit beteken dat _____.

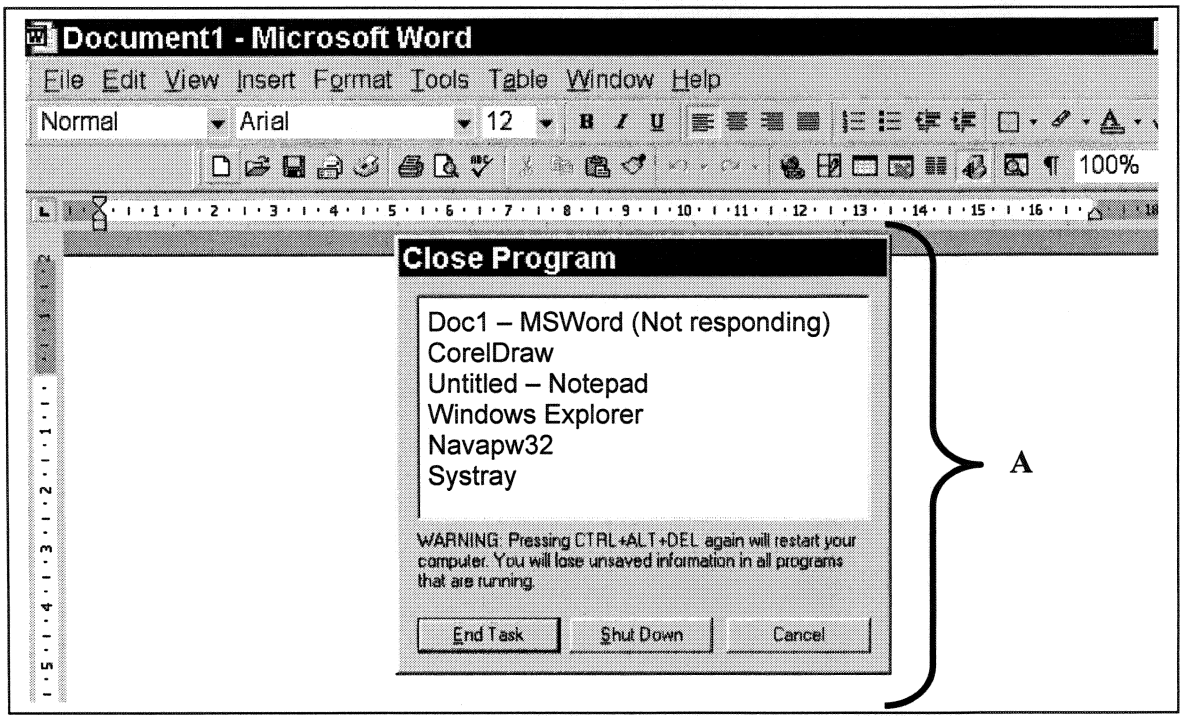
A. die rekenaar weer aangeskakel moet word ("restart")

B. die gebruiker die verkeerde kombinasie van sleutels gedruk het

C. die gebruiker sy/haar werk in MSWord moet stoor en weer begin

D. MSWord moet afgesluit en weer begin word indien die gebruiker wil voortgaan om in MSWord te werk

QUESTION 2
SYSTEM SOFTWARE



2.1 The area marked **A** (also called a task list) shows a list of all the programs which are currently running on the computer. For each of the following sentences, choose the correct option to complete the sentence. Write down only the question number and the letter, e.g. 2.1.5 C.

2.1.1 The fact that several programs are running at the same time, means that _____.

A. this computer is linked to a network

B. the operating system on this computer is a multi-tasking system

C. this system is being used for time-sharing

D. more than one person uses this computer

2.1.2 Next to MSWord in brackets are the words "not responding". This means that _____.

A. the computer must be restarted

B. the user has pressed the wrong combination of keys

C. the user must save his/her work in MSWord and start again

D. MSWord must be closed and restarted if the user wants to continue working in MSWord

2.1.3 Die area wat **A** gemerk is, word vertoon deur _____.

A. MSWord

B. die bedryfstelsel

C. die databasis

D. die toepassingsprogram

2.1.4 "Navapw32" wys dat Norton Antivirus tans uitvoer. Die antivirus-program is 'n voorbeeld van _____.

A. toepassingsagteware

B. nutsfasiliteite, wat deel is van stelselprogrammatuur

C. programmatuur wat deel is van Windows (4)

2.2 Die tabel aan die regterkant vertoon vyf funksies van 'n bedryfstelsel.

Kies slegs een letter (uit A,B,C,D,E) vir elkeen van die onderstaande sinne, om te wys watter funksie van toepassing is op daardie situasie.

Funksies van 'n bedryfstelsel:
A. Beheer prosesse wat uitgevoer word deur die SVE
B. Beheer die toekenning van geheue
C. Beheer toestel toevoer/afvoer
D. Beheer lêer toevoer/afvoer
E. Voorsien die koppelvlak tussen die gebruiker en die kern ("kernel")

2.2.1 'n Sein word gestuur om vas te stel of die drukker aangeskakel is.

2.2.2 Data word uitgeruil tussen RAM en die virtuele geheue-area.

2.2.3 Sandra tik 'n brief in MSWord en speel terselfdertyd 'n CD op die rekenaar.

2.2.4 'n Rekord word gehou van klusters op die skyf (om te wys of hulle vol of leeg is). (4)

2.3 2.3.1 Waarvoor staan **POST**? (1)

2.3.2 Wat is die doel van die POST-roetines? (2)

2.3.3 Wat is die naam van die program wat die POST-roetines bevat? (1)

2.1.3 The area marked **A** is displayed by _____.

A. MSWord

B. the operating system

C. the database

D. the application program

2.1.4 "Navapw32" shows that Norton Antivirus is running. The antivirus program is an example of _____.

A. application software

B. utility software, which is part of system software

C. software which forms part of Windows (4)

2.2 The table on the right shows five functions of an operating system.

Choose one letter only (from A, B, C, D, E) for each of the sentences below, to show the function that applies to that situation.

Functions of an operating system:
A. Manages processes executed by CPU
B. Manages memory allocation
C. Manages device input / output
D. Manages file input / output
E. Provides interface between the user and the kernel

2.2.1 A signal is sent out to determine whether the printer is switched on.

2.2.2 Data is swopped between RAM and the virtual memory area.

2.2.3 Sandra is typing a letter in MSWord and playing a CD on the computer at the same time.

2.2.4 A record is kept of clusters on disk (to show whether they are full or empty). (4)

2.3 2.3.1 What does **POST** stand for? (1)

2.3.2 What is the purpose of the POST routines? (2)

2.3.3 What is the name of the program which contains the POST routines? (1)

2.4 Windows 95/98 en Windows XP is bedryfstelsels wat gebruik kan word vir 'n alleenstaande tuisrekenaar. Noem DRIE ander bedryfstelsels wat vir dieselfde doel gebruik kan word. (3)

2.5 Noem TWEE bedryfstelsels wat gebruik kan word vir kliënt-bedienernetwerke. (2)

2.6 Waarvoor word die "Registry" gebruik in die Windows bedryfstelsels? (1)

2.7 Gee TWEE redes waarom jy jou vriend sal aanraai om Windows XP op sy/haar rekenaar te laai. (2)
[20]

VRAAG 3
BINÊRE LOGIKA

3.1 Vereenvoudig elkeen van die volgende en wys ten minste een stap voor die finale antwoord. Indien jy net 'n 1 of 'n 0 skryf, sal dit nie gemerk word nie.

3.1.1 (1' + 0).1 (2)

3.1.2 (0 + 1)' + 1.0 (2)

3.2 Hieronder is die eerste drie rekords uit 'n databasis-tabel. Spelers wie se name in hierdie tabel voorkom, is afkomstig van verskillende provinsies en neem aan verskeie sportsoorte deel.

Naam	Sport (enige naam van 'n sportsoort)	Provinsie (enige van die 9 provinsies in SA)	Amateur of professioneel
Amit Noormohammed	swem	Gauteng	amateur
Zanele Dombo	hokkie	Limpopo	professioneel
Michael Chang	rugby	Mpumalanga	professioneel

Om alle amateur rugbyspelers te lys, kan 'n mens 'n Boole-uitdrukking soos volg skryf:

rugby EN amateur *(of: rugby AND amateur)*

Skryf Boole-uitdrukkings wat spelers sal lys volgens die onderstaande beskrywings:

3.2.1 Alle professionele spelers vanaf die Limpopo provinsie

3.2.2 Alle swemmers, behalwe die wat vir Gauteng swem

3.2.3 Enige sokker- of rugbyspelers, wat professionele spelers is (6)
[10]

2.4 Windows 95/98 and Windows XP are operating systems which can be used for a stand-alone home computer. Name THREE other operating systems which can be used for the same purpose. (3)

2.5 Name TWO operating systems which can be used for client-server networks. (2)

2.6 What is the "Registry" used for in the Windows operating systems? (1)

2.7 Give TWO reasons why you would recommend that a friend put Windows XP on his/her computer. (2)
[20]

QUESTION 3
BINARY LOGIC

3.1 Simplify each of the following, showing at least one step before the final answer. If you write only 1 or 0, your answer will not be marked.

3.1.1 (1' + 0).1 (2)

3.1.2 (0 + 1)' + 1.0 (2)

3.2 Below are the first three records from a database table. Players whose names appear in this table are from different provinces and play several different sports.

Name	Sport (any name of a sport)	Province (any of the 9 provinces in SA)	Amateur or professional
Amit Noormohammed	swimming	Gauteng	amateur
Zanele Dombo	hockey	Limpopo	professional
Michael Chang	rugby	Mpumalanga	professional

To have all amateur rugby players listed, one can write a Boolean expression as follows:

rugby AND amateur

Write down Boolean expressions which will list players according to the descriptions below:

3.2.1 All professional players from the Limpopo province

3.2.2 All swimmers except those who swim for Gauteng

3.2.3 Any soccer or rugby players who are professional players (6)
[10]

VRAAG 4
DATAKOMMUNIKASIE

4.1 Gee 'n definisie van elk van die volgende terme, soos gebruik in die konteks van datakommunikasie:

4.1.1 vol-duplekskommunikasie (2)

4.1.2 parallelle kommunikasie (1)

4.1.3 meeluistering ("eavesdropping") (2)

4.1.4 asinchrone transmissie ("asynchronous transmission") (2)

4.2 Verduidelik hoe 'n kontrolesom ("checksum") gebruik word om vas te stel of data korrek versend is. (2)

4.3 'n Rekenaarmaatskappy met die naam Interdata skenk die volgende toerusting aan Zemvelo College:

20 rekenaars, elkeen met 'n netwerkkaart, 'n sekere aantal UTP kabels en koaksiale kabels

4.3.1 Watter ekstra toerusting sal benodig word as Zemvelo College sou besluit om 'n ster-topologie te hê? (1)

4.3.2 Sonder ekstra toerusting, kan hulle kies tussen twee ander topologieë. Noem hierdie topologieë en maak 'n skets van elkeen. (4)

4.3.3 'n LAN-argitektuur spesifiseer die *tipe toegangsmetode*, asook drie ander spesifikasies. Noem hierdie drie spesifikasies. (3)

4.3.4 Beskryf DRIE voordele wat 'n netwerk vir Zemvelo College inhou. (3)

4.3.5 Om toegang tot die Internet te verkry, moet Zemvelo College TCP/IP op hulle rekenaars hê. Wat is TCP/IP? (1)

4.4 Interdata het 'n nuwe netwerk wat vesel-optiese kabels en ongeleide kommunikasie gebruik.

4.4.1 Beskryf 'n veseloptiese kabel (gee ten minste TWEE feite). (2)

4.4.2 Interdata gebruik ook WAP-toegeruste selfone. Wat is 'n **WAP-toegeruste selfoon**? (1)

4.4.3 Interdata se Kaapstad en Londen kantore kommunikeer deur middel van satellietverbinding. Watter medium word gebruik om data te versend tussen die satelliete? (1)

QUESTION 4
DATA COMMUNICATIONS

4.1 Give a definition of each of the following terms, as used in the context of data transmission:

4.1.1 full duplex communication (2)

4.1.2 parallel communication (1)

4.1.3 eavesdropping (2)

4.1.4 asynchronous transmission (2)

4.2 Explain how a checksum is used to determine whether data has been transmitted correctly. (2)

4.3 A computer company called Interdata donates the following equipment to Zemvelo College:

20 computers, each with a network card, some UTP cables and some coaxial cables

4.3.1 What extra equipment would be needed if Zemvelo College decided to have a star topology? (1)

4.3.2 Without extra equipment, they could choose between two other topologies. Name these topologies and draw a sketch of each. (4)

4.3.3 A LAN architecture specifies the *type of access method*, as well as three other specifications. Name these three specifications. (3)

4.3.4 Describe THREE advantages Zemvelo College gains by having a network. (3)

4.3.5 To gain access to the Internet, Zemvelo College needs TCP/IP on their computers. What is TCP/IP? (1)

4.4 Interdata has a new network which uses fibre optic cables and wireless communication.

4.4.1 Describe a fibre optic cable (give at least TWO facts). (2)

4.4.2 Interdata also uses WAP-enabled cellphones. What is a **WAP-enabled cellphone**? (1)

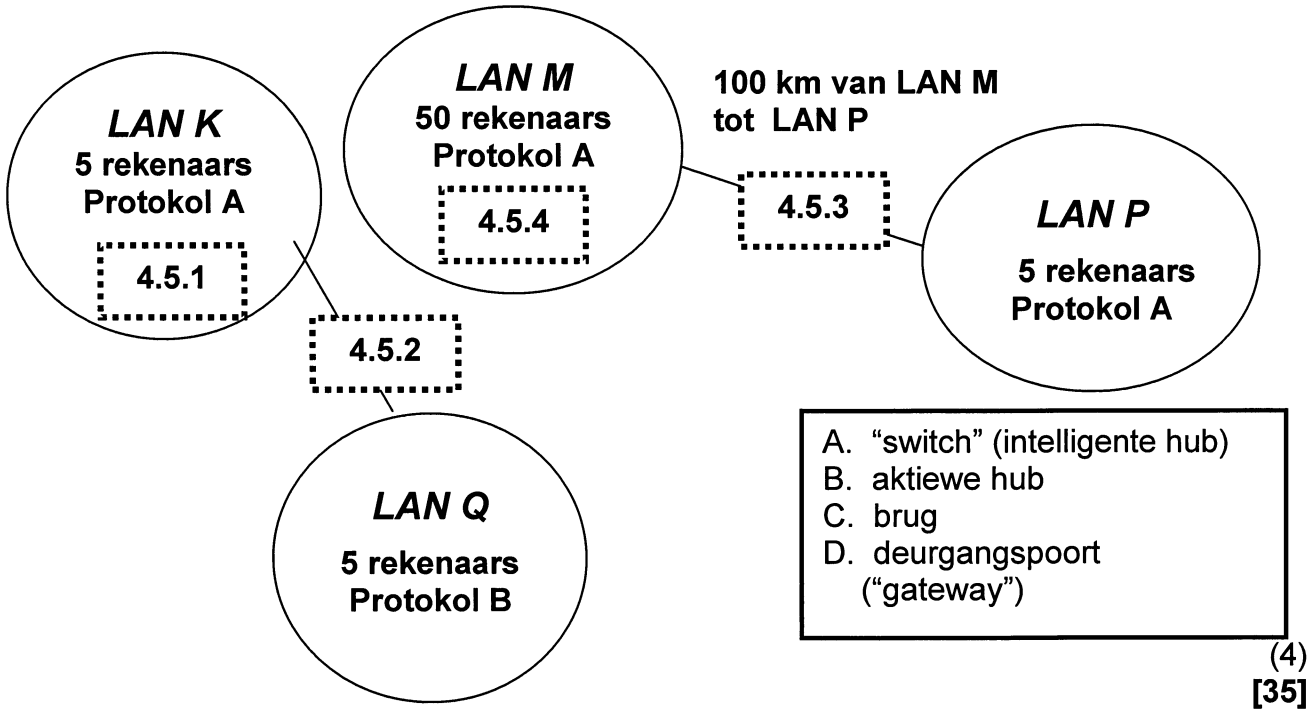
4.4.3 Interdata's Cape Town and London offices are linked by satellite. What medium is used to transmit data between these satellites? (1)

4.4.4 Kan Interdata se netwerk beskryf word as 'n MAN (Metropolitaanse Area Netwerk)? Gee 'n rede vir jou antwoord. (2)

4.4.5 Om hulle data te beskerm, stel Interdata 'n "firewall" op in hulle netwerk. Wat is 'n "**firewall**"? (2)

4.4.6 Behalwe vir 'n "firewall", noem TWEE ander voorkomende maatreëls wat getref kan word om data op 'n netwerk te beskerm teen verlies of beskadiging. (2)

4.5 Die volgende diagram stel vier netwerke voor. Vir elkeen van 4.5.1 tot 4.5.4 in die diagram, kies die korrekte netwerk- of internetwerktoestel uit die lys wat in die blokkie wat A tot D genommer is. (Voorbeeld: 4.5.5 E.)



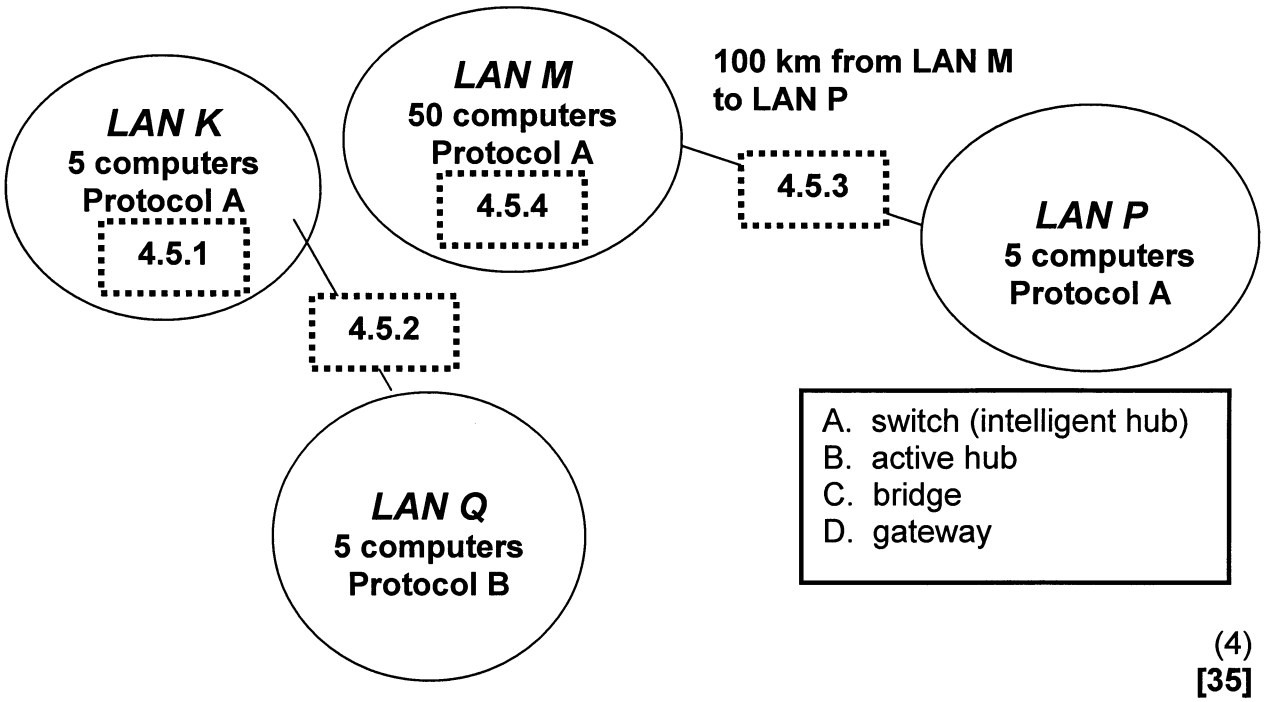
(4)
[35]

4.4.4 Can Interdata's network be described as a MAN (Metropolitan Area Network)? Give a reason for your answer. (2)

4.4.5 To protect their data Interdata sets up a firewall on their network. What is a **firewall**? (2)

4.4.6 Apart from a firewall, name TWO other precautionary measures that can be taken to protect data on a network against loss or damage. (2)

4.5 The following diagram represents four networks. For each of 4.5.1 to 4.5.4 in the diagram, choose the correct network or internetwork device from the list numbered A to D. (Example: 4.5.5 E.)



(4)
[35]

VRAAG 5
DIE INTERNET EN NUWE TEGNOLOGIE

5.1 Kies die items in die regterkantste kolom wat pas by die items aan die linkerkant. Elke letter A tot G mag **net een keer** gebruik word.

5.1.1 www.google.com	A. 'n IP adres
5.1.2 hyperlink	B. Die naam van 'n ISP
5.1.3 Netscape Navigator	C. 'n Suid-Afrikaanse soekenjin
5.1.4 jennyz@yahoo.com	D. 'n Soekenjin
5.1.5 192.139.23.15	E. 'n Webblaaier
5.1.6 Mweb	F. 'n e-pos adres
5.1.7 www.ananzi.co.za	G. 'n Woord of "icon" wat, wanneer daarop geklik word, veroorsaak dat 'n ander Internetblad gelaai word

(7)

5.2 Aan die regterkant is die name van drie opmerktale ("markup languages"). Waarvoor word 'n opmerktaal ("markup language") gebruik?

XML:	Extensible Markup Language
HTML:	Hypertext Markup Language
WML:	Wireless Markup Language

(2)

5.3 Hieronder is twee webadresse (gemerk A en B).

A: www.phoenix.ac.de
B: www.phoenix.gov.za

5.3.1 Verduidelik waarna die tweede laaste deel, bv. **ac** of **gov**, in bogenoemde adresse verwys.

5.3.2 Verduidelik waarna die laaste deel, bv. **de** of **za**, verwys. (2)

QUESTION 5
THE INTERNET AND NEW TECHNOLOGY

5.1 Match the items in the right-hand column with the items on the left. Each letter from A to G may be used **only once**.

5.1.1	www.google.com	A. An IP address
5.1.2	hyperlink	B. The name of an ISP
5.1.3	Netscape Navigator	C. A South African search engine
5.1.4	jennyz@yahoo.com	D. A search engine
5.1.5	192.139.23.15	E. A web browser
5.1.6	Mweb	F. An e-mail address
5.1.7	www.ananzi.co.za	G. A word or icon which, when clicked, results in a different Internet page being loaded

(7)

5.2 On the right are the names of three markup languages. What is a markup language used for?

XML:	Extensible Markup Language
HTML:	Hypertext Markup Language
WML:	Wireless Markup Language

(2)

5.3 Below are two web addresses (marked A and B).

A: www.phoenix.ac.de
B: www.phoenix.gov.za

5.3.1 Explain what the second last part, e.g. **ac** or **gov**, refers to in the above addresses.

5.3.2 Explain what the last part, e.g. **de** or **za**, refers to. (2)

5.4 Vir elke ontbrekende woord in die volgende paragraaf, kies die beste opsie vanuit die moontlikhede (genommer A tot G) hieronder. (Voorbeeld: 5.4.5 H.)

Wanneer 'n mens aan die Internet verbind, werk die inbelproses soos volg:

Die gebruiker se modem skakel die 5.4.1 _____. Die gebruiker se rekeningnaam ("account name") en 5.4.2 _____ word nagegaan deur die bediener van die 5.4.3 _____. Indien alles korrek is, word die gebruiker se rekenaar verbind met die 5.4.4 _____.

A. bediener
B. Internet
C. rekening besonderhede
D. wagwoord
E. Internet Diensverskaffer (ISP)
F. netwerk
G. nommer gespesifiseer deur die Internet Diensverskaffer (ISP) (4)

5.5 Skryf **Waar** of **Vals** vir elk van die volgende sinne.

5.5.1 Bluetooth is programmatuur wat 'n mens toelaat om data te versend.

5.5.2 Bluetooth kan net binne een kamer gebruik word, nie tussen kamers nie.

5.5.3 In Bluetooth-tegnologie word data versend deur radiogolwe. (3)

5.6 Wanneer 'n digitale kamera 'n foto neem, word 'n digitale beeld geskep. Noem TWEE soorte stoortoestelle wat gebruik kan word om die digitale beelde te stoor wanneer die foto's geneem word. (2)
[20]

VRAAG 6
SOSIALE IMPLIKASIES

6.1 Die term "globale konnektiwiteit" verwys na die feit dat baie rekenaars vanoor die hele wêreld met mekaar verbind is.

6.1.1 Noem TWEE voordele van globale konnektiwiteit vir die gemeenskap. (2)

6.1.2 Noem TWEE probleme wat globale konnektiwiteit geskep het vir die gemeenskap in die algemeen. (2)

6.2 Die gebruik van rekenaars het nadele vir gesondheid, maar ons kan ook rekenaars aanwend vir die verbetering van ons gesondheid.

6.2.1 Gee TWEE voorbeelde van hoe die gebruik van rekenaars 'n nadeel vir ons gesondheid kan inhou. (2)

6.2.2 Gee EEN voorbeeld van hoe ons rekenaars kan gebruik om verbetering in gesondheid te bewerkstellig. (1)

5.4 For each missing word from the following paragraph, choose the best option from the possibilities (numbered A to G) below. (Example: 5.4.5 H.)

When one connects to the Internet, the dial-up process works as follows:

The user's modem dials the 5.4.1____. The user's account name and 5.4.2 _____ is checked by the server belonging to the 5.4.3 _____. If everything is correct, the user's computer is connected to the 5.4.4 _____.

A. server
B. Internet
C. account details
D. password
E. Internet Service Provider
F. network
G. number specified by the Internet Service Provider (4)

5.5 Write down **True** or **False** for each of the following sentences.

5.5.1 Bluetooth is software which allows one to transmit data.

5.5.2 Bluetooth can only be used within one room, not between rooms.

5.5.3 In Bluetooth technology data is transmitted through radio waves. (3)

5.6 When a digital camera takes a picture, a digital image is created. Name TWO kinds of storage devices that can be used to store the images as the pictures are taken. (2)

[20]

QUESTION 6
SOCIAL IMPLICATIONS

6.1 The term "global connectivity" refers to the fact that many computers from all over the world are connected to one another.

6.1.1 Name TWO advantages of global connectivity for society. (2)

6.1.2 Name TWO problems that global connectivity has created for society in general. (2)

6.2 The use of computers has disadvantages for health, but we can also use computers towards improving our health.

6.2.1 Give TWO examples of how the use of computers can be a disadvantage to our health. (2)

6.2.2 Give ONE example of how we can use computers towards improving our health. (1)

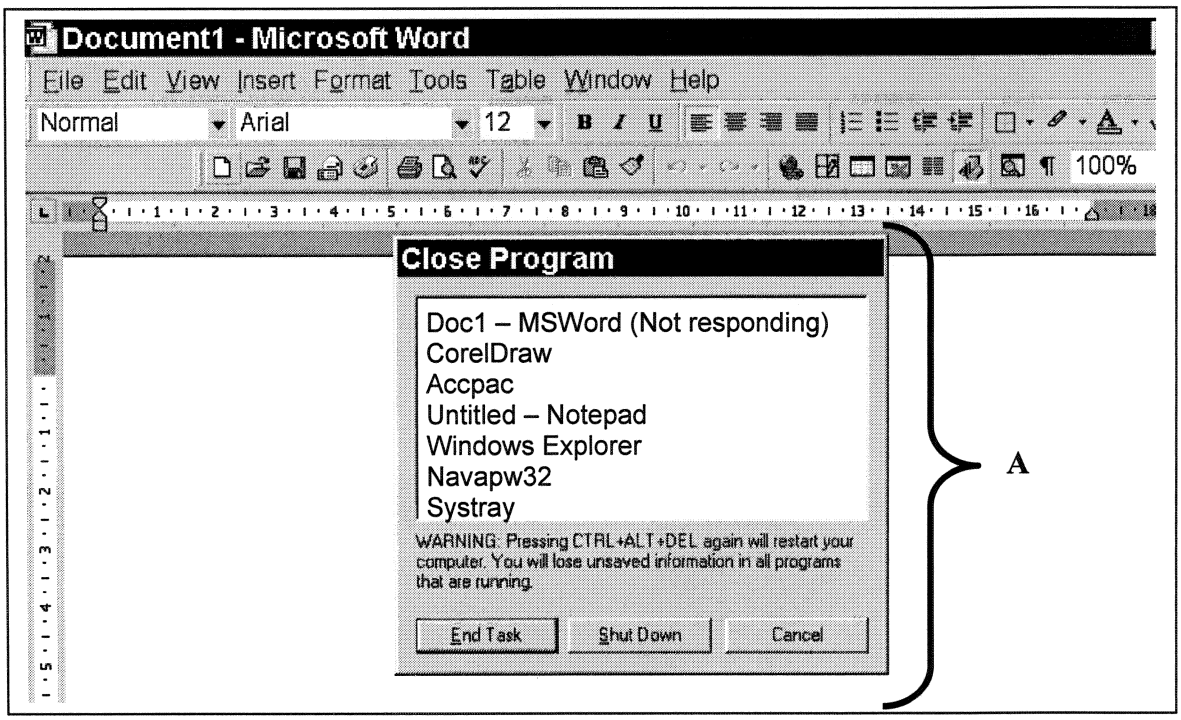
6.3 6.3.1 Wat is 'n **digitale handtekening**? (2)

6.3.2 Wat is 'n **digitale sertifikaat**? (2)

6.3.3 Verduidelik hoe 'n digitale handtekening gebruik word om 'n dokument wat versend word van 'n sender na 'n ontvanger, te beskerm. (1)

6.4 Noem DRIE maniere waarop die gebruik van e-pos die dag-tot-dag werking van 'n besigheid kan verbeter. (3)
[15]

VRAAG 7
TOEPASSINGSPAKKETTE



7.1 MSWord (Microsoft Word) is 'n voorbeeld van toepassingsprogrammatuur, en vorm deel van 'n "suite" van programme wat as 'n enkele pakket aangekoop kan word.

7.1.1 Noem een ander voorbeeld van toepassingsprogrammatuur uit die lys hierbo (gemerk **A**). (1)

7.1.2 Noem nog 'n program wat aan dieselfde "suite" of pakket behoort as MSWord. (1)

6.3 6.3.1 What is a **digital signature**? (2)

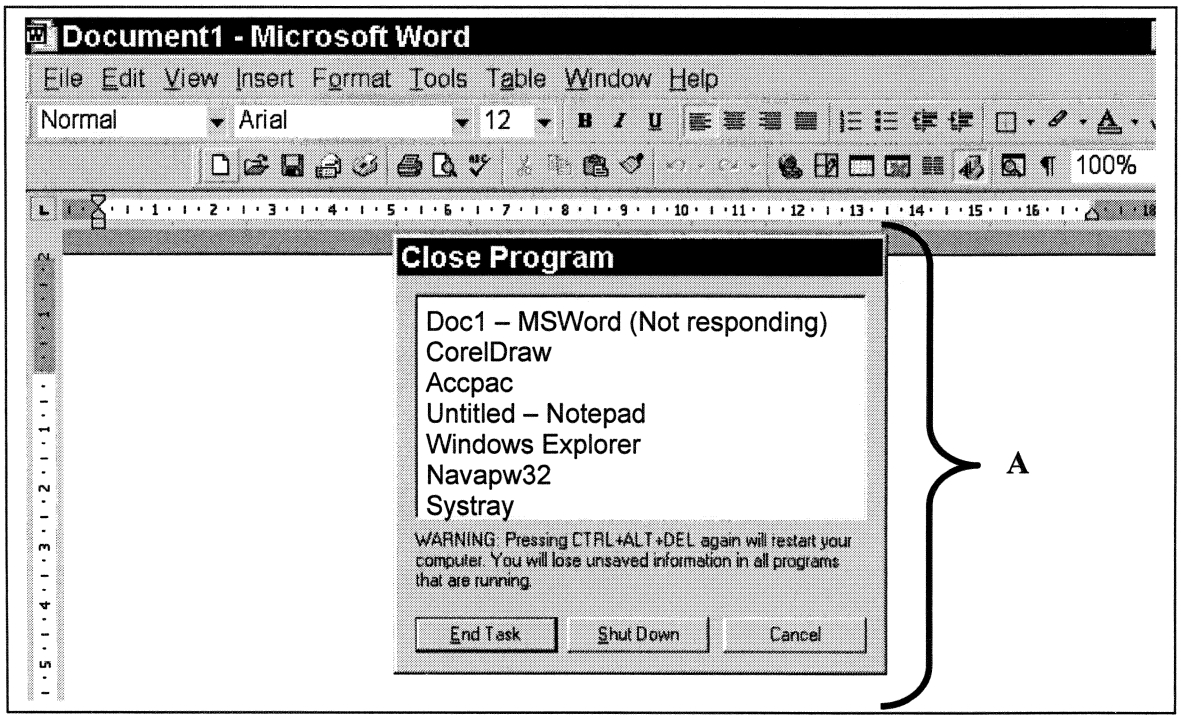
6.3.2 What is a **digital certificate**? (2)

6.3.3 Explain how a digital signature is used to protect a document that is transmitted from a sender to a receiver. (1)

6.4 Name THREE ways in which the use of e-mail improves the day-to-day running of a business. (3)

[15]

QUESTION 7
APPLICATION PACKAGES



7.1 MSWord (Microsoft Word) is an example of application software, and forms part of a suite of programs which can be bought in one package.

7.1.1 Name one other item from the list above (marked **A**) which is an example of application software. (1)

7.1.2 Name another program which belongs to the same suite or package of programs as MSWord. (1)

7.2 Die volgende tabel toon drie programme wat saam met Windows voorsien word. Kopieër en voltooi die tabel in jou antwoordboek.

	Program	Stelselsagteware? (Skryf "ja" of "nee")	Waarvoor word dit gebruik?
7.2.1	Paint		
7.2.2	Defrag		
7.2.3	System monitor		

(6)

7.3 Waarvoor word elkeen van die volgende programme gebruik?

7.3.1 Frontpage

7.3.2 MacAfee (2)

7.4 Die volgende tabel is 'n uittreksel uit 'n sigblad, en wys funksies en formules.

	A	B
1	3	=A5-A4
2	7	=SUM(A3:A5)
3	5	=SUM(A3, A5)
4	2	=LARGE(A1:A5,2)
5	8	=IF(A5>3,"poor",IF(A5>5, "average",IF(A5>8,"excellent", "unknown")))

Skryf neer wat vertoon sal word in:

7.4.1 Sel B2

7.4.2 Sel B3

7.4.3 Sel B4

7.4.4 Sel B5

(Voorbeeld: Sel B1 sal die volgende vertoon : 6) (4)

7.2 The following table shows three programs which are supplied with Windows. Copy and complete the table.

	Program	System software? (Write "yes" or "no")	What is it used for?
7.2.1	Paint		
7.2.2	Defrag		
7.2.3	System monitor		

(6)

7.3 What is each of the following programs used for?

7.3.1 Frontpage

7.3.2 MacAfee (2)

7.4 The following table is an extract from a spreadsheet, showing functions and formulae.

	A	B
1	3	=A5-A4
2	7	=SUM(A3:A5)
3	5	=SUM(A3, A5)
4	2	=LARGE(A1:A5,2)
5	8	=IF(A5>3,"poor",IF(A5>5, "average",IF(A5>8,"excellent", "unknown")))

Write down what will be displayed in:

7.4.1 Cell B2

7.4.2 Cell B3

7.4.3 Cell B4

7.4.4 Cell B5

(Example: Cell B1 will display the following: 6) (4)

7.5 Die volgende tabel is 'n uittreksel uit 'n databasis tabel. In hierdie tabel is die veld **Naam** die *primêre sleutel*.

Naam	Van	ID nommer	Beroep
Sipho	Tshabalala	6710120045083	Onderwyser
Jenny	Smith	6604080023086	Tandarts
Mamta	Naidoo	6311050023083	Rekenmeester

7.5.1 Waarom sal dit nie moontlik wees om die naam Jenny McDonald by hierdie tabel te voeg nie? (1)

7.5.2 Watter verandering/e sou jy kon maak aan die tabel, om dit moontlik te maak om Jenny McDonald by te voeg? (1)

7.6 'n Databasistabel bevat die volgende drie velde: **naam**, **ouderdom**, **graad**.

7.6.1 Skryf 'n geldigheidsreël wat gebruik kan word om seker te maak dat slegs ouderdomme van 12 tot 18 (insluitend) geldig is vir hierdie tabel. (11 is te jonk; 19 is te oud.)

7.6.2 Die veld "graad" het 'n geldigheidsreël wat as volg lui: **Like "Grd*"** Vanuit die volgende lys, skryf *slegs* die items neer wat geldige toevoer sal wees vir die **graad** veld:

- Gr 10
- Grd 11
- Grade 9
- Grd

(4)
[20]

TOTAAL: 150

EINDE

7.5 The following table is an extract from a database table. In this table the field **Name** is the *primary key*.

Name	Surname	ID number	Occupation
Sipho	Tshabalala	6710120045083	Teacher
Jenny	Smith	6604080023086	Dentist
Mamta	Naidoo	6311050023083	Accountant

7.5.1 Why will it not be possible to add the name Jenny McDonald to this table? (1)

7.5.2 What change/s could you make to the table to make it possible to add Jenny McDonald? (1)

7.6 A database table contains the following three fields: **name**, **age**, **grade**.

7.6.1 Write down a validation rule that can be used to ensure that only ages from 12 to 18 (inclusive) are valid for this table. (11 is too young; 19 is too old.)

7.6.2 The field "grade" has a validation rule which states: **Like "Grd*"** From the following list write down *only* the items which will be valid entries in the **grade** field:

- Gr 10
- Grd 11
- Grade 9
- Grd

(4)
[20]

TOTAL: 150

END