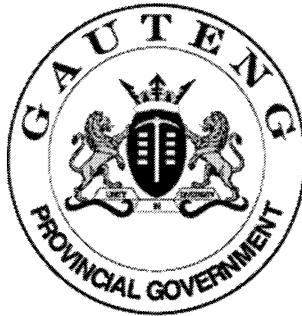


SENIOR CERTIFICATE EXAMINATION
SENIORSERTIFIKAAT-EKSAMEN



OCTOBER / NOVEMBER
OKTOBER / NOVEMBER

2004

ANIMAL HUSBANDRY

VEEKUNDE

HG

803-1/0

15 pages + answer sheet
15 bladsye + antwoordblad

ANIMAL HUSBANDRY HG



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**GAUTENGSE DEPARTEMENT VAN ONDERWYS
SENIORSERTIFIKAAT-EKSAMEN**

**VEEKUNDE HG
TYD: 3 UUR
TOTAAL : 300**

INSTRUKSIES AAN DIE KANDIDATE:

1. Hierdie vraestel bestaan uit **TWEE** afdelings.
2. **AFDELING A is VERPLIGTEND. Beantwoord vrae 1.1 tot 1.38 op die antwoordblad volgens die instruksies wat die vrae voorafgaan**
3. Plaas die voltooide antwoordblad voor in u eksamenboek.
4. Maak seker dat u **EKSAMENNOMMER** op die antwoordblad ingevul is.
5. **AFDELING B:**
Uit hierdie afdeling moet u enige **VYF** van die **SES** vrae wat gestel is, volledig beantwoord.
6. Gee in u eie belang aandag aan die leesbaarheid van u skrif en die netheid van u werk.
7. Gebruik deurgaans dieselfde nommers as dié op die vraestel.

**GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION**

**ANIMAL HUSBANDRY HG
TIME: 3 HOURS
MARKS: 300**

INSTRUCTIONS TO CANDIDATES:

1. The examination paper consists of **TWO** sections.
2. **SECTION A** is **COMPULSORY**. Answer questions 1.1 to 1.38 on the answer sheet in accordance with the instructions that precede these questions.
3. Place the completed answer sheet inside the front cover of your examination book.
4. Make sure that you have written your **EXAMINATION NUMBER** on the answer sheet.
5. **SECTION B:**
You are expected to answer, in full, any **FIVE** of the **SIX** questions from this section.
6. It is in your own interest to pay attention to the legibility of your handwriting and the neat appearance of your work.
7. Use the same numbers as those on the examination paper throughout.

AFDELING A

VRAAG 1

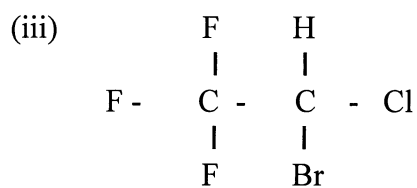
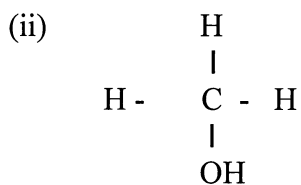
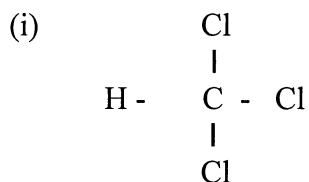
HIERDIE VRAAG IS VERPLIGTEND

Op elke vraag van 1.1 tot 1.38 word verskeie antwoorde verskaf waarvan slegs **EEN** korrek is. Toon die korrekte antwoord aan deur 'n kruisie (**X**) oor die toepaslike letter langs die betrokke vraagnommer op die antwoordblad te maak.

BYVOORBEELD:

1.14	A	B	C	D
------	---	---	--------------	---

1.1 Watter van die volgende chemiese strukture vorm **NIE** deel van die groep Halo-alkane nie?



- A. Slegs (i)
 B. (i) en (ii)
 C. (i) en (iii)
 D. (i), (ii) en (iii)

(2)

SECTION A

QUESTION 1

THIS SECTION IS COMPULSORY

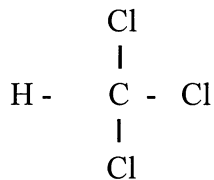
To each of the questions 1.1 to 1.38 various answers are given of which only **ONE** is correct. Indicate the correct answer of choice by drawing a cross (**X**) over the appropriate letter to the question on the answer sheet.

EXAMPLE:

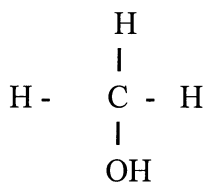
1.14	A	B	C	D
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1.1 Which of the following chemical structures does **NOT** form part of the group Halo-alcynes?

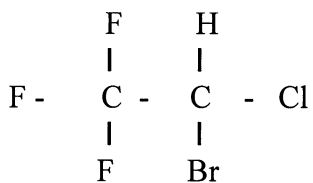
(i)



(ii)



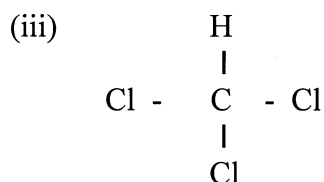
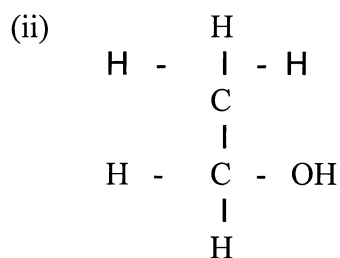
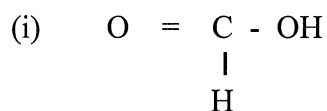
(iii)



- A. Only (i)
 B. (i) and (ii)
 C. (i) and (iii)
 D. (i), (ii) and (iii)

(2)

1.2 Watter van die volgende chemiese strukture word deur 'n oksidasieproses gevorm?



- A. (i)
B. (iii)
C. (i) en (ii)
D. (ii) en (iii) (2)

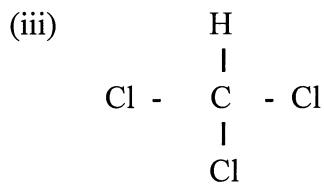
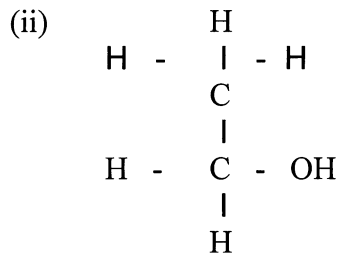
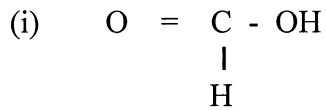
1.3 Die eenvoudigste alkyn staan bekend as:

- A. Propyn.
B. Asetileen.
C. Freon.
D. Chloroform. (2)

1.4 Watter **EEN** van die volgende stowwe is die produk van oksidasie wat deur lug veroorsaak word?

- A. Asynsuur.
B. Propantriol.
C. Etanol.
D. Butanol. (2)

1.2 Which of the following chemical structures are formed through an oxidation process?



- A. (i)
B. (iii)
C. (i) and (ii)
D. (ii) and (iii) (2)

1.3 The most common alcyne are known as:

- A. Propyne.
B. Acetylene.
C. Freon.
D. Chloroform. (2)

1.4 Which **ONE** of the following substances is the product of oxidation caused by air?

- A. Acetic acid.
B. Propantriol.
C. Ethanol.
D. Butanol. (2)

- 1.5 Alkene is meer reaktief as die alkane. Die rede hiervoor is die:
- A. dubbelbindings in alkene.
 - B. alkane se koolstofkettings wat korter is.
 - C. teenwoordigheid van suurstof in alkene.
 - D. aantal waterstofatome in alkane. (2)
- 1.6 Watter **EEN** van die volgende chemiese formules is dié van 'n karboksielsuur wat soms in die landbou gebruik word?
- A. $\text{CH}_3 \text{COOH}$
 - B. $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{OOH}$
 - C. $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{OH}$
 - D. $\text{CH}_3 \text{CH}_3$ (2)
- 1.7 Watter van die volgende eienskappe is waar omtrent polisakkariede?
- (i) Almal het 'n hoë molekulêre massa.
 - (ii) Hulle is uit heksoses en pentoses saamgestel.
 - (iii) Hulle het meestal 'n soet smaak.
 - (iv) 'n Voorbeeld is dekstrien.
- A. Al bogenoemde
 - B. (i), (ii) en (iv)
 - C. (ii) en (iv)
 - D. (ii) en (i) (2)
- 1.8 Watter van die volgende kenmerke is **WAAR** van nie-proteïenstikstofverbindings?
- (i) Hulle bevat baie aminosure.
 - (ii) Alle diere kan dit doeltreffend benut.
 - (iii) Dit is baie goedkoper per eenheid as byvoorbeeld vismeel.
 - (iv) Biuret is 'n voorbeeld.
- A. (i) en (iii)
 - B. (iii) en (iv)
 - C. (ii) en (iv)
 - D. (ii), (iii) en (iv) (2)
- 1.9 'n Kenmerk van hawer is dat dit:
- A. arm is aan die aminosuur, metionien.
 - B. nie deur perde bo ander energievoer verkies word nie.
 - C. min onversadigde vetsure bevat.
 - D. ongeveer 20% ru-proteïene bevat. (2)

- 1.5 Alkene are more active than alkanes. The reason for this is the:
- A. double bonds in alkenes..
 - B. shorter found carbon chains in alkanes.
 - C. presence of oxygen in alkenes.
 - D. number of hydrogen atoms in alkanes. (2)
- 1.6 Which **ONE** of the following chemical formulae is that of carboxylic acid which is sometimes used in agriculture?
- A. $\text{CH}_3 \text{ COOH}$
 - B. $\text{CH}_3 \text{ CH}_2 \text{ CH}_2 \text{ OOH}$
 - C. $\text{CH}_3 \text{ CH}_2 \text{ CH}_2 \text{ OH}$
 - D. $\text{CH}_3 \text{ CH}_3$ (2)
- 1.7 Which of the following characteristics are true of polysaccharides?
- (i) They all have a high molecular mass.
 - (ii) They are composed of hecsoses and pentoses.
 - (iii) They generally have a sweet taste.
 - (iv) An example is dextrine.
- A. All of the above
 - B. (i), (ii) and (iv)
 - C. (ii) en (iv)
 - D. (ii) en (i) (2)
- 1.8 Which of the following characteristics is **TRUE** concerning non-protein nitrogen compounds?
- (i) They contain a lot of amino-acids.
 - (ii) All animals can use it effectively.
 - (iii) They have a lower unit cost than, for example, fishmeal.
 - (iv) An example of such compounds is Biuret.
- A. (i) and (iii)
 - B. (iii) and (iv)
 - C. (ii) and (iv)
 - D. (ii), (iii) and (iv) (2)
- 1.9 A characteristic of oats is that it:
- A. is deficient in the animo-acids methionine.
 - B. is not preferred to other energy feeds by horses.
 - C. contains few unsaturated fatty acids.
 - D. contains about 20% crude proteins. (2)

- 1.10 Watter **EEN** van die volgende ruvoere lewer die meeste voedingstowwe per grondeenheid?
- A. Oulandsgras.
 - B. Tef.
 - C. Mieliekulvoer.
 - D. Lusern. (2)
- 1.11 Watter van die volgende stellings is **WAAR** van voervoorsiening?
- (i) Hooi bevorder 'n hoë produksiepeil.
 - (ii) Volvoere word veral vir varke gevoer.
 - (iii) 'n Dier het vrye toegang tot 'n volvoer.
 - (iv) Die verskil tussen 'n volvoer en 'n rantsoen lê in die kwaliteit.
- A. (i), (ii) en (iii)
 - B. (iii) en (iv)
 - C. (ii) en (iv)
 - D. (ii) en (iii) (2)
- 1.12 Die hoeveelheid bruto energie wat nie in die mis verskyn nie, staan bekend as die:
- A. skynbare verteerbare energie.
 - B. metaboliseerbare energie.
 - C. netto energie.
 - D. verteerbare energie. (2)
- 1.13 Proteïenryke konsentre word slegs in klein hoeveelhede in voere ingesluit, omdat dit:
- A. baie skaars is.
 - B. die diere siek kan maak.
 - C. moeilik deur diere benut word.
 - D. baie duur is. (2)
- 1.14 Om 'n voer se metaboliseerbare energie te bepaal, moet die volgende afgetrek word:
- (i) energieverlies in mis.
 - (ii) metaangas in rumen.
 - (iii) die onvolledige geoksideerde verbindings in urine.
 - (iv) energie oorgedra na produkte.
- A. (i), (ii) en (iii)
 - B. (i) en (iv)
 - C. (i), (ii), (iii) en (iv)
 - D. (iii) en (iv) (2)

- 1.10 Which **ONE** of the following crude feeds applies the most nutrients per soil unit?
- A. Weeping love grass.
 - B. Tef.
 - C. Maze silage.
 - D. Lucern. (2)
- 1.11 Which **ONE** of the following statements concerning feed supply is **TRUE**?
- (i) Hay promotes a high production level.
 - (ii) Complete feeds are especially fed to pigs.
 - (iii) An animal has free access to a complete feed.
 - (iv) The difference between a complete feed and a ration has to do with its quality.
- A. (i), (ii) and (iii)
 - B. (iii) and (iv)
 - C. (ii) and (iv)
 - D. (ii) and (iii) (2)
- 1.12 The amount of gross energy which does not appear in the manure is known as the:
- A. apparent digestive energy.
 - B. metabolised energy.
 - C. nett energy.
 - D. digestible energy. (2)
- 1.13 Protein rich concentrates are only included in small quantities in feeds because they:
- A. are very scarce.
 - B. can make the animals ill.
 - C. are digested with difficulty by animals.
 - D. are very expensive. (2)
- 1.14 To determine the metabolisable energy of a feed, the following factors need to be subtracted:
- (i) loss of energy in manure.
 - (ii) methane gas in rumen.
 - (iii) incomplete oxidised compounds in urine.
 - (iv) energy transferred to products.
- A. (i), (ii) and (iii)
 - B. (i) and (iv)
 - C. (i), (ii), (iii) and (iv)
 - D. (iii) and (iv) (2)

- 1.15 Die volgende faktor speel die belangrikste rol in die beplanning en samestelling van die rantsoen:
- A. die goedkoopste voer.
 - B. die voer wat die grootste bydrae lewer.
 - C. die voer met die meeste volume.
 - D. die koste van die konsentraat. (2)
- 1.16 'n Kenmerk van suurveld is dat:
- A. die smaaklikheid daarvan by volwassenheid verlore gaan.
 - B. min gras geproduseer word.
 - C. dit minder as 650 mm per jaar reënval nodig het.
 - D. dit baie selde tot 'n voedingstekort aanleiding gee. (2)
- 1.17 Die geslagsbepaling by voëls word van die geslagschromosoom van die ... afgelei.
- A. vroulike dier (ZW)
 - B. vroulike dier (XY)
 - C. manlike dier (XY)
 - D. manlike dier (ZW) (2)
- 1.18 Die proses wat daarop gemik is om die nageslag so nou moontlik aan 'n uitstaande voorouer verwant te kry, staan bekend as:
- A. inteling.
 - B. massateling.
 - C. kruisteling.
 - D. lynteling. (2)
- 1.19 Watter EEN van die volgende is 'n voorbeeld van omgewingsvariasies wat 'n invloed op 'n dier se fenotipe kan hê?
- A. Genewerking.
 - B. Lamstatus.
 - C. Ouderdom van vaar.
 - D. Oorkruising. (2)
- 1.20 Die basis van enige seleksieprogram word bepaal deur die:
- A. kennis wat die boer van die ras het.
 - B. mate van dominansie wat voorkom.
 - C. variasies wat voorkom.
 - D. effek van die omgewing op die dier. (2)

- 1.15 The most important factor to consider when planning and compiling a ration is the use of:
- A. cheapest feed.
 - B. feed which makes the largest contribution.
 - C. feed with the most volume.
 - D. costs of the concentrate. (2)
- 1.16 A characteristic of sourveld is that it:
- A. loses its palatability value at maturity.
 - B. does not produce plenty of grass.
 - C. requires less than 650 mm of rainfall annually.
 - D. very seldom leads to a food shortage. (2)
- 1.17 The sex determination of birds is derived from the sex chromosomes of the:
- A. female (ZW)
 - B. female (XY)
 - C. male (XY)
 - D. male (ZW) (2)
- 1.18 The process which aims at getting offspring as closely related to an outstanding ancestor as possible, is known as:
- A. inbreeding.
 - B. mass breeding.
 - C. cross-breeding.
 - D. line breeding. (2)
- 1.19 Which **ONE** of the following is an example of an environmental variation which could have an influence on an animal's phenotype?
- A. Gene action.
 - B. Lamb status.
 - C. Age of sire.
 - D. Cross-over. (2)
- 1.20 The basis of any selection programme is determined by:
- A. a farmer's knowledge of a breed.
 - B. the degree of domination which occurs.
 - C. the variations which occur.
 - D. the effect of the environment on an animal. (2)

1.21 Watter van die volgende is korrek aangaande die kleur van semen?

	KLEUR	AANTAL SPERME ($\times 10^9/\text{ml}$)	
(I)	romerig	3,0 - 4,0	
(ii)	dik melkerig	1,0 - 2,5	
(iii)	dun melkerig	0,5 - 1,0	
(iv)	waterig	0,5 - 1,5	
A.	(ii) en (iii)		
B.	(i) en (iii)		
C.	(i) en (iv)		
D.	(i)		(2)

1.22 Watter van die volgende is waar ten opsigte van die intra-uterinemetode van kunsmatige inseminasie?

- (i) Semen word net voor die serviks geplaas.
 - (ii) 'n Laparoskoop word gebruik.
 - (iii) Vars saad word gebruik.
 - (iv) Dit is 'n goedkoop metode.
- A. (i) en (ii)
B. (iii)
C. (ii) en (iii)
D. (ii) (2)

1.23 Direk nadat semen opgevang word, is die aangewese temperatuur waarteen dit gehou word:

- A. 45 °C
B. -296 °C
C. 38 °C
D. -38 °C (2)

1.24 Watter van die volgende mengsels kan gebruik word om die verhouding lewende spermselle: dooie spermselle vas te stel?

- A. 1 druppel eosien + 2 druppels semen + 2 druppels nigrosien.
B. 1 druppel eosien + 1 druppel semen + 2 druppels nigrosien.
C. 2 druppels eosien + 2 druppels semen + 1 druppel nigrosien.
D. 2 druppels eosien + 1 druppel semen + 2 druppels nigrosien. (2)

1.21 Which of the following is / are correct about the colour of semen?

	COLOUR	NUMBER OF SPERMS ($\times 10^9/\text{ml}$)	
(i)	creamy	3,0 - 4,0	
(ii)	thick milky	1,0 - 2,5	
(iii)	thin milky	0,5 - 1,0	
(iv)	watery	0,5 - 1,5	
A.	(ii) and (iii)		
B.	(i) and (iii)		
C.	(i) and (iv)		
D.	(i)		(2)

1.22 Which of the following is true about the intra-uterine method of artificial insemination?

- (i) Semen is placed just in front of the cervix.
 - (ii) A laparoscope is used.
 - (iii) Fresh seed is used.
 - (iv) It is a cheap method.
- A. (i) and (ii)
B. (iii)
C. (ii) and (iii)
D. (ii) (2)

1.23 What is the prescribed temperature for the storage of semen directly after it has been collected?

- A. 45 °C
B. -296 °C
C. 38 °C
D. -38 °C (2)

1.24 Which of the following mixtures can be used to determine the ratio living sperm cells: dead sperm cells?

- A. 1 drop eosin + 2 drops semen + 2 drops nigrosin.
B. 1 drop eosin + 1 drop semen + 2 drops nigrosin.
C. 2 drops eosin + 2 drops semen + 1 drop nigrosin.
D. 2 drops eosin + 1 drop semen + 2 drops nigrosin. (2)

1.25 Daar bestaan reeds voorbehoede entstowwe teen siekte soos, onder meer:

- (i) miltsiekte.
- (ii) sponssiekte.
- (iii) melkkoors.
- (iv) bloutong.

- A. (i) en (iii)
- B. (i) en (ii)
- C. (i), (ii) en (iv)
- D. (ii) en (iv)

(2)

1.26 Watter van die volgende is kenmerke van bosluise?

- (i) Hulle behoort tot die klas Arachnida.
- (ii) Hulle veroorsaak brandsiekte.
- (iii) Hulle het 3 paar pote in die nimfstadium.
- (iv) Die bloubosluis veroorsaak rooiwater.
- (v) Hulle kan met opgiemiddels beheer word.

- A. (i) en (iii)
- B. (i), (iii) en (iv)
- C. (i) en (iv)
- D. (i), (iv) en (v)

(2)

1.27 Watter EEN van die volgende tipes uitwendige parasiete is gasheerspesifiek?

- A. Vlieë.
- B. Luise.
- C. Brommers.
- D. Muggies.

(2)

1.28 Fagositiese selle wat in die selwande van sinusoïede van organe voorkom, staan bekend as:

- A. limfselle.
- B. rooibloedselle.
- C. monosiete.
- D. retikulo-endoteelselle.

(2)

1.29 'n Voorbeeld van 'n organiese siekte wat by beeste voorkom, is:

- A. longontsteking.
- B. kanker.
- C. melkkoors.
- D. hartwater.

(2)

1.25 Preventative vaccines already exist against diseases such as:

- (i) anthrax.
- (ii) black quarter.
- (iii) milk fever.
- (iv) blue tongue.

- A. (i) and (iii)
- B. (i) and (ii)
- C. (i), (ii) and (iv)
- D. (ii) and (iv)

(2)

1.26 Which of the following are characteristics of ticks?

- (i) They belong to the category Arachnida.
- (ii) They cause mange (scab).
- (iii) They have 3 pair of legs in the nymph stage.
- (iv) The blue tick causes red water.
- (v) They can be controlled with spray remedies.

- A. (i) and (iii)
- B. (i), (iii) and (iv)
- C. (i) and (iv)
- D. (i), (iv) and (v)

(2)

1.27 Which **ONE** of the following types of external parasites is host specific?

- A. Flies.
- B. Lice.
- C. Bluebottles.
- D. Midges.

(2)

1.28 Phagocytic cells which occur in the cell wall of organ sinusoids, are known as:

- A. lymph cells.
- B. redblood cells.
- C. monocytes.
- D. reticule-endothelial cells.

(2)

1.29 An example of an organic disease in cattle are:

- A. pheumonis.
- B. cancer.
- C. milk-fever.
- D. heart-water.

(2)

- 1.30 Watter grootte naald word by skape gebruik vir onderhuidse inspuiting?
- A. 14
 - B. 16
 - C. 18
 - D. 24
- (2)
- 1.31 Die normale liggaamstemperatuur van 'n hoender is:
- A. 38 °C
 - B. 38,5 °C
 - C. 39 °C
 - D. 41 °C
- (2)
- 1.32 Watter van die volgende is 'n tegniese bestuursaktiwiteit in die boerdery?
- A. Die opstel van taakspesifikasies.
 - B. Die hou van produksierekords.
 - C. Die bemerking van produkte.
 - D. Die omvang van produksie.
- (2)
- 1.33 Fisiese en biologiese begrotings kan omgesit word in finansiële begrotings deur:
- A. pryse en hoeveelhede te kombineer.
 - B. pryse en gehalte te kombineer.
 - C. bedryfstakbegrotings te kombineer.
 - D. pryse te verhoog.
- (2)
- 1.34 Die aankoop van produksiemiddele is 'n voorbeeld van ... termynbeplanning in landbou.
- A. medium
 - B. lang
 - C. kort
 - D. medium of kort
- (2)
- 1.35 Die groepering van bestuursaktiwiteite tot 'n sinvolle formele handelingstruktuur waarin die maksimum produksie kan plaasvind, staan bekend as:
- A. rasionalisering.
 - B. organisering.
 - C. taakanalise
 - D. koördinerings.
- (2)

- 1.30 What size of a needle is used for subcutaneous injection in sheep?
- A. 14
 - B. 16
 - C. 18
 - D. 24
- (2)
- 1.31 The normal body temperature of a fowl is:
- A. 38 °C
 - B. 38,5 °C
 - C. 39 °C
 - D. 41°C
- (2)
- 1.32 Which of the following is a technical management function in farming?
- A. Drafting of job specifications.
 - B. Keeping production records.
 - C. Marketing products.
 - D. The extent of production.
- (2)
- 1.33 Physical and biological budgets can be converted to financial budgets by:
- A. combining cost and quantity.
 - B. combining cost and quality.
 - C. combining production section budgets.
 - D. increasing prices.
- (2)
- 1.34 The purchase of producers' goods is an example of ... -term planning in agriculture.
- A. medium
 - B. long
 - C. short
 - D. medium or short
- (2)
- 1.35 The grouping of management activities into a formal action structure to render the maximum production or return, is known as:
- A. rationalization.
 - B. organization.
 - C. task analysis
 - D. co-ordination.
- (2)

1.36 Watter van die volgende is waar omtrent boerdery-intensifikasie en spesialisasie?

- (i) Dit versnel die omset.
- (ii) Minder diere word vir die mark afgerond.
- (iii) Kundige bestuur is nodig.
- (iv) Die winsgrens per dier is klein.

- A. (i) en (iii)
- B. (i) en (iv)
- C. (i), (iii) en (iv)
- D. (iii) en (iv)

(2)

1.37 Wat is die grootste uitdaging vir die toekomstige diereprodusent?

- A. Moderne tegnologie.
- B. Die hoë bevolkingsaanwas.
- C. Kwynende navorsingsmoontlikhede.
- D. Die gebruik van die rekenaar.

(2)

1.38 Die grootste voordeel van 'n kommersiële binnelandse visboerdery is die voorsiening van die voedingsbestanddeel:

- A. proteïen
- B. vitamien D
- C. lewertraan
- D. aminosure

(1)

TOTAAL AFDELING A: [75]

- 1.36 Which of the following is true concerning intensification and specialization of farming?
- (i) It speeds up the turnover.
 - (ii) Fewer animals are fattened for market.
 - (iii) Skilful management is necessary.
 - (iv) The profit margin per animal is small.
- A. (i) and (iii)
B. (i) and (iv)
C. (i), (iii) and (iv)
D. (iii) and (iv) (2)
- 1.37 What is the greatest challenge for the future animal producer?
- A. Modern technology.
B. The high population growth/increase.
C. Languishing research possibilities.
D. The use of the computer. (2)
- 1.38 The greatest advantage of a commercial inland fishery is the provision of the nutrient:
- A. protein.
B. vitamin D.
C. cod liver oil.
D. amino acids. (1)

TOTAL SECTION A: [75]

AFDELING B**BEANTWOORD ENIGE VYF VRAE UIT HIERDIE AFDELING.****VRAAG 2**

- 2.1 Koolwaterstowwe word sistematies op 'n wetenskaplike wyse verdeel en onderverdeel in reekse met ooreenstemmende eienskappe. Verskaf 'n volledige verdeling van koolwaterstowwe. (Gee ook voorbeelde in elke geval.) (9)
- 2.2 Bespreek volledig "Hidroponika" as 'n nuwe tendens in die landbou. (6)
- 2.3 Noem die rol wat droë ruvoere in die diere rantsoen vervul. (5)
- 2.4 Bespreek die waarde van NPN vir die bees teenoor die vark. Verskaf redes vir u antwoord. (6)
- 2.5 Watter faktore bepaal die vordering wat met massaseleksie teweeggebring word? (5)
- 2.6 Noem die nadele van bosluise op plaasdiere. (6)
- 2.7 Noem die voordele en nadele van die mikro-rekenaar vir die veeboer. (8)
- [45]**

VRAAG 3

- 3.1 Verskaf die klassifikasie van aminosure. (5)
- 3.2 Noem **DRIE** visspesies wat aangepas is vir binnelandse visboerdery. (3)
- 3.3 Gee 'n algemene beskrywing van vismeel. Verwys na die voedingswaarde en die gebruike. (8)
- 3.4 Definieer die volgende begrippe:
- 3.4.1 Bruto energie. (3)
- 3.4.2 Metaboliseerbare energie. (3)
- 3.5 Bespreek oestrussinchronisasie van skape met progesteron. (8)
- 3.6 Bespreek die lewerslak as 'n interne parasiet by melkbeeste. Gee aandag aan die volgende aspekte:
- 3.6.1 Lewenskringloop. (7)
- 3.6.2 Simptome. (3)
- 3.7 Noem die **VYF** bestuurstake van die boer. (5)
- [45]**
b.o.

SECTION B

ANSWER ANY FIVE QUESTIONS IN THIS SECTION.

QUESTION 2

- 2.1 Hydrocarbons are systematically divided and sub-divided into series with common characteristics. Give a complete schematic division of hydrocarbons. (Give examples where applicable). (9)
- 2.2 Discuss in detail "Hidroponics" as a new trend in agriculture. (6)
- 2.3 Name the functions of dry roughage in the ration of a farm animal. (5)
- 2.4 Discuss the value of NPN for cattle and pigs. Give reasons for your answer. (6)
- 2.5 Which factors determine the progress which mass selection brings about. (5)
- 2.6 Name the disadvantages of ticks on farm animals. (6)
- 2.7 Name the advantages and disadvantages of the micro-computer for the animal farmer. (8)
- [45]

QUESTION 3

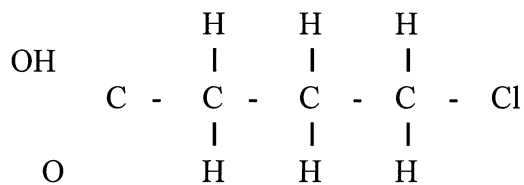
- 3.1 Give the classification of amino-acids. (5)
- 3.2 Name **THREE** fish species that is well adapted to inland fisheries. (3)
- 3.3 Give a general description of fish meal. Refer particularly to the uses and nutritional content. (8)
- 3.4 Define the following concepts:
- 3.4.1 Gross energy. (3)
- 3.4.2 Metabolisable energy. (3)
- 3.5 Discuss the oestrus synchronisation of sheep by means of progesterone. (8)
- 3.6 Discuss the liver fluke as an internal parasite in dairy cattle. Pay attention to the following aspects:
- 3.6.1 Life cycle. (7)
- 3.6.2 Symptoms. (3)
- 3.7 Name the **FIVE** management tasks of the farmer. (5)

[45]

P.T.O.

VRAAG 4

4.1 Bestudeer die onderstaande chemiese struktuur en beantwoord die vrae wat volg:



4.1.1 Benoem die organiese struktuur. (2)

4.1.2 Verduidelik stapsgewys hoe u die struktuur benoem het. (8)

4.2 Bespreek volledig die begrip “RHB”. (6)

4.3 Verduidelik die begrip “Selektiewe beweiding” volledig met verwysing na die:

4.3.1 oorsake daarvan. (2)

4.3.2 verskillende tipes wat voorkom. (6)

4.4 Om ‘n nuwe beesras te teel:

4.4.1 Van watter tipe teling moet gebruik gemaak word? (1)

4.4.2 Wat is die voordele van die teelstelsel wat u by 4.4.1 genoem het? (4)

4.4.3 Wat is die nadele van die teelstelsel wat u by 4.4.1 genoem het? (4)

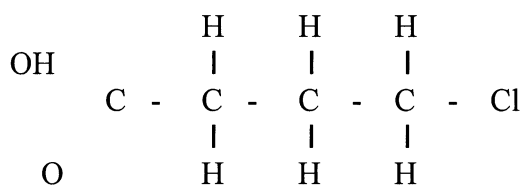
4.5 Noem **SEWE** algemene oorsake van siektes by plaasdiere. (7)

4.6 Noem **VYF** vereistes vir ‘n goeie mark. (5)

[45]

QUESTION 4

4.1 Study the chemical structure below and answer the questions which follow:

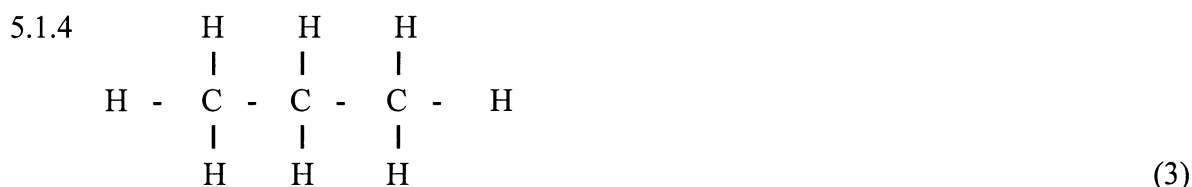
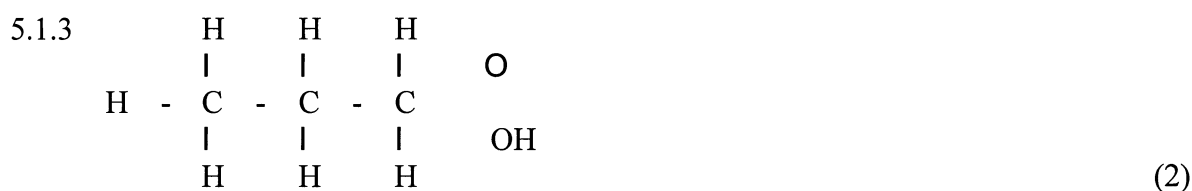
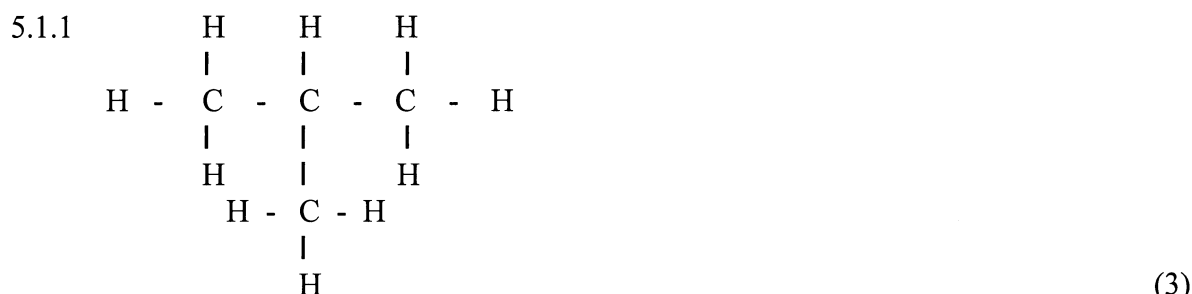


- 4.1.1 Name the organic compound. (2)
- 4.1.2 Explain step by step, how you named the structure. (8)
- 4.2 Discuss in detail the concept “RHB”. (6)
- 4.3 Explain the concept “Selective grazing” in full with reference to the:
- 4.3.1 causes. (2)
- 4.3.2 and the different types. (6)
- 4.4 To breed a new strain of cattle:
- 4.4.1 What type of breeding system must be used? (1)
- 4.4.2 What are the advantages of 4.4.1? (4)
- 4.4.3 What are the disadvantage of such a system in 4.4.1? (4)
- 4.5 Name **SEVEN** general causes of diseases in farm animals. (7)
- 4.6 Name **FIVE** requirements for a good market. (5)

[45]

VRAAG 5

5.1 Benoem die onderstaande chemiese strukture:



5.2 Noem die vereistes vir die maak van kuilvoer. (6)

5.3 Bepaal die verteerbaarheidskoeffisiënt van groen hawer indien 'n skaap 5 kg gevreet het, met 'n voggehalte van 70% en hy 700 g mis uitgeskei het met 'n voggehalte van 59%. Toon alle berekeninge. (10)

5.4 Verduidelik die volgende terme ten opsigte van seleksie:

5.4.1 Natuurlike seleksie. (3)

5.4.2 Tandem metode. (3)

5.4.3 Kunsmatige seleksie. (3)

5.5 Verduidelik stapsgewys die prosedure om 'n bloedsmeer te maak. (8)

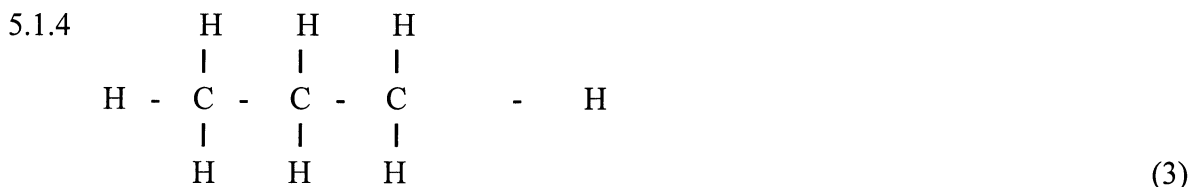
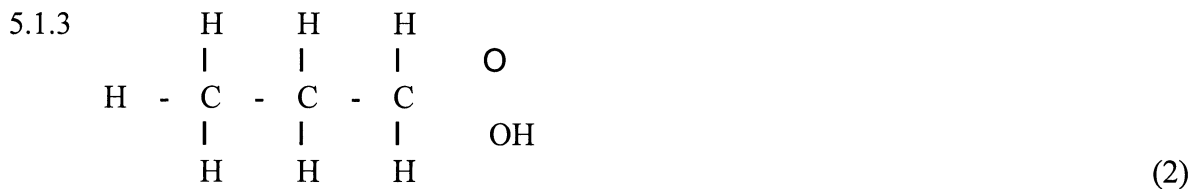
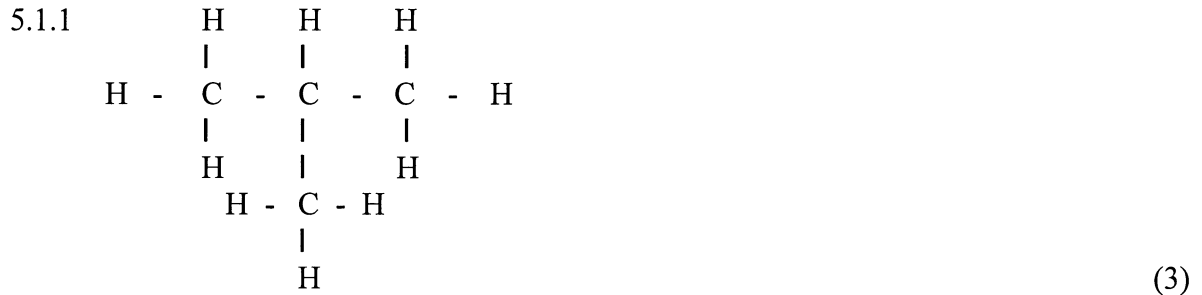
5.6 Wat is die doel van 'n begroting? (3)

[45]

b.o.

QUESTION 5

5.1 Study the chemical structure below and answer the questions which follow:



5.2 Name the requirements for making silage. (6)

5.3 Calculate the digestibility of green oats if a sheep ingested 5 kg with a moisture content of 70% and 700 g of manure are excreted with a moisture content of 59%. Show all calculations. (10)

5.4 Explain the following term regarding selection:

5.4.1 Natural selection. (3)

5.4.2 Tandem method. (3)

5.4.3 Artificial selection. (3)

5.5 Explain step by step the procedure for making a bloodsmear. (8)

5.6 What is the aim of a budget? (3)

[45]

P.T.O.

VRAAG 6

- 6.1 Verduidelik volledig die begrip “Isomerie”. Verskaf die name van ’n voorbeeld. (7)
- 6.2 Noem die verskillende voerbymiddels en die rol wat dit in diervoeding speel. (8)
- 6.3 Illustreer Mendel se eerste wet van oorerwing met behulp van ’n diagram. Verwys na die proses van segregasie en herkombinasie van gene waar die P₁-generasie, ’n Rooi bul (Rr) gepaar word met ’n Swart koei (rr) (rooi is dominant). Gee die samestelling van die F₁-genotipiese en fenotipiese nageslag. (10)
- 6.4 Onmiddellik nadat semen opgevang is, word dit geëvalueer ten opsigte van sekere eienskappe. Bespreek die eienskappe. (9)
- 6.5 Watter tipe inspuitings kan aan ’n dier toegedien word? (3)
- 6.6 Verduidelik die redes vir herbepanning in die landbou. (8)
- [45]

VRAAG 7

- 7.1 Gee die algemene formules van:
- 7.1.1 alkene. (2)
- 7.1.2 alkyne. (2)
- 7.1.3 koolhidrate. (2)
- 7.1.4 aminosure. (4)
- 7.2 Bespreek volledig die voorkeure van plaasdiere ten opsigte van die fisiese vorm van voere soos mielies en kleingrane. (8)
- 7.3 Noem **VYF** voordele van embryo-oorplasing. (5)
- 7.4 Bespreek **VYF** faktore wat omgewingvariasie veroorsaak. (10)
- 7.5 Watter verskille is daar tussen die huisvlieg en die stalvlieg? (4)
- 7.6 Hoekom word bloedmonsters van plaasdiere geneem? (6)
- 7.7 Noem **TWEE** bemarkingskemas vir die veeboer. (2)
- [45]

TOTAAL VAN AFDELING B: [225]**GROOTTOTAAL: [300]****EINDE****b.o.**

QUESTION 6

- 6.1 Explain in detail the concept “Isomer”. Give the names of an example. (7)
- 6.2 Name the different feed supplements and the role which each plays in animal nutrition. (8)
- 6.3 Draw a diagram to illustrate the Mendelian first law of inheritance. Refer to process of segregation and recombination where the P₁-generation, a Red bull (Rr), is cross bred with a Black cow (rr) (red is dominant). Give the composition of the F₁-genotype and phenotype offspring. (10)
- 6.4 Immediately after semen has been collected, it is evaluated in terms of certain characteristics. Discuss the characteristics. (9)
- 6.5 What type of injections can be administered to animals? (3)
- 6.6 Explain the reasons for replanning in agriculture. (8)
- [45]

QUESTION 7

- 7.1 Give the general formula of:
- 7.1.1 alkenes. (2)
- 7.1.2 alcynes. (2)
- 7.1.3 carbohydrates. (2)
- 7.1.4 amino acids. (4)
- 7.2 Discuss, in detail, the preferences of farm animals as far as the physical form of feeds such as maize and cereals is concerned. (8)
- 7.3 Name **FIVE** advantages of embryo transplanting. (5)
- 7.4 Describe **FIVE** factors which are responsible for environmental variations. (10)
- 7.5 What clear differences are there between the housefly and stablefly. (4)
- 7.6 For what purpose are blood samples taken? (6)
- 7.7 Name **TWO** marketing schemes for the stock farmer. (2)
- [45]

TOTAL OF SECTION B: [225]**GRAND TOTAL: [300]****END****P.T.O.**

**ANIMAL HUSBANDRY / VEEKUNDE
HIGHER GRADE / HOër GRAAD**

SUBJECT CODE / VAKKODE: 803-1/0

ANSWER SHEET / ANTWOORDBLAD

EXAMINATION NUMBER / EKSAMENNUMMER																				
CENTRE NUMBER / SENTRUMNUMMER																				

**SECTION A / AFDELING A
QUESTION 1 / VRAAG 1**

1.1	A	B	C	D
1.2	A	B	C	D
1.3	A	B	C	D
1.4	A	B	C	D
1.5	A	B	C	D
1.6	A	B	C	D
1.7	A	B	C	D
1.8	A	B	C	D
1.9	A	B	C	D
1.10	A	B	C	D
1.11	A	B	C	D
1.12	A	B	C	D
1.13	A	B	C	D
1.14	A	B	C	D
1.15	A	B	C	D
1.16	A	B	C	D
1.17	A	B	C	D
1.18	A	B	C	D
1.19	A	B	C	D
1.20	A	B	C	D
1.21	A	B	C	D
1.22	A	B	C	D
1.23	A	B	C	D
1.24	A	B	C	D
1.25	A	B	C	D
1.26	A	B	C	D
1.27	A	B	C	D
1.28	A	B	C	D
1.29	A	B	C	D
1.30	A	B	C	D
1.31	A	B	C	D
1.32	A	B	C	D
1.33	A	B	C	D
1.34	A	B	C	D
1.35	A	B	C	D
1.36	A	B	C	D
1.37	A	B	C	D
1.38	A	B	C	D

**TOTAL SECTION: A
TOTAAL AFDELING: A**

75