

**NAMIBIA SENIOR SECONDARY CERTIFICATE**

**AGRICULTURE ORDINARY LEVEL**

**4321/1**

PAPER 1 Multiple Choice

1 hour

Marks 40

**2020**

Additional Materials: Multiple choice answer sheet  
Non-programmable calculator  
Soft clean eraser  
Soft pencil (type B or HB is recommended)

**INSTRUCTIONS AND INFORMATION TO CANDIDATES**

- Write in soft pencil.
- Make sure that you receive the multiple choice answer sheet with **your Candidate Number** on it.
- There are **forty** questions on this paper.
- Answer **all** questions.
- For each question, there are four possible answers, **A, B, C** and **D**. Choose the one you consider correct and record your choice in soft pencil on the separate answer sheet.
- If you want to change an answer, thoroughly erase the one you wish to delete.
- **Read the instructions on the answer sheet carefully.**
- Each correct answer will score one mark.
- Any rough working should be done in this question paper.
- All questions in this paper carry equal marks.
- You may use a non-programmable calculator.

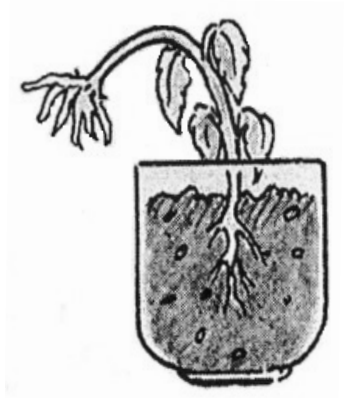
This document consists of **9** printed pages and **3** blank pages.



Republic of Namibia

**MINISTRY OF EDUCATION, ARTS AND CULTURE**

- 1 How do livestock contribute most to the Namibian economy?
  - A employment
  - B food security
  - C foreign exchange
  - D transport
  
- 2 Which of the following is the optimum temperature range for maize crop production?
  - A 0 – 10 °C
  - B 10 – 20 °C
  - C 20 – 30 °C
  - D 30 – 40 °C
  
- 3 The diagram below shows a wilting plant.



What caused the appearance of the plant?

- A The rate of transpiration exceeds the rate of water uptake.
  - B The rate of transpiration equals the rate of water uptake.
  - C The rate of water uptake equals the rate of evaporation.
  - D The rate of water uptake exceeds the rate of transpiration.
- 4 The picture shows mulching in maize crop production.



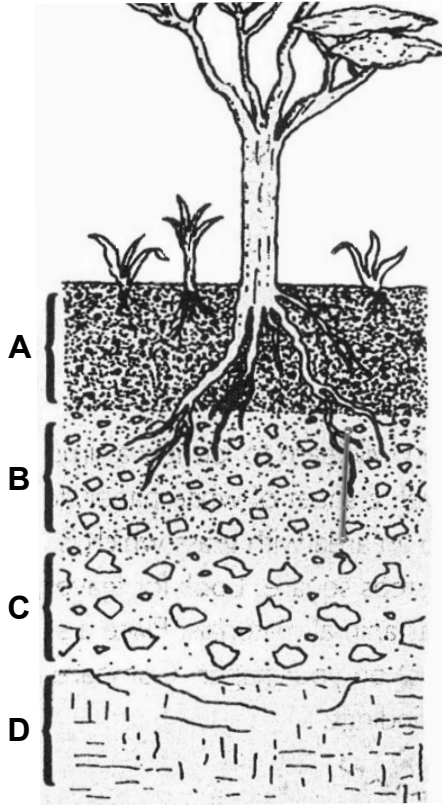
What is the **main** reason of practising mulching?

- A to conserve fuel
- B to conserve labour
- C to conserve moisture
- D to conserve seeds

- 5 Which land tenure system can be bought and is privately owned?
- A communal land  
B freehold land  
C leasehold land  
D state land
- 6 In which way can HIV and AIDS affect food production in Namibia?
- A when farm workers become too sick to work and are often absent  
B when household income is lost due to HIV/AIDS related death or illness  
C when school-going children lose their parents and are unable to pay school fees  
D when a sufferer cannot afford costly HIV/AIDS drugs
- 7 In which form is nitrogen taken up by plant roots?
- A ammonia  
B nitrates  
C nitrites  
D proteins
- 8 What is the **main** function of the element potassium in plants?
- A chlorophyll production  
B growth of leaves  
C root development  
D quality fruit production
- 9 What type of structure does fertile loam soil have?
- A blocky  
B crumb  
C loose  
D single grain
- 10 Which row best describes characteristics of clay soil?

	particle size	root growth	fertility
A	large	easy	good
B	large	difficult	poor
C	small	easy	poor
D	small	difficult	good

The diagram is a cross section of a soil profile. Use the diagram to answer questions 11 and 12.



- 11 What can be observed in the soil profile?
- A soil air
  - B soil horizons
  - C soil organisms
  - D soil water
- 12 Why does layer **A** show a dark colour compared to the other layers?
- A it contains drained acids
  - B it contains more nutrients
  - C it contains more humus
  - D it contains more roots
- 13 Why should farmers apply agricultural lime to soil?
- A to decrease soil acidity and increase soil alkalinity
  - B to decrease soil alkalinity and acidity
  - C to increase soil acidity and decrease alkalinity
  - D to increase soil alkalinity and acidity

14 The picture shows eroded soil.



What could be the best method to control soil erosion shown in the picture?

- A practice rotational grazing
  - B prevent overgrazing
  - C plugging the gully
  - D use a wind break
- 15 What is the role of leguminous plants in maintaining soil fertility?
- A converting nitrates back to atmospheric nitrogen
  - B converting nitrogen supplied through fertilisers to nitrates
  - C fixation of atmospheric nitrogen by bacteria in their root nodules
  - D fixation of nitrogen supplied through organic wastes into the soil
- 16 To which group of pests do mealy bugs and scale insects belong?
- A biting and chewing
  - B boring and chewing
  - C piercing and biting
  - D piercing and sucking
- 17 What is needed for asexual reproduction to take place?
- A an embryo
  - B fertilisation
  - C one part of a parent
  - D two parents
- 18 What is the purpose of isolating sick animals?
- A to control their feeding habits
  - B to prevent their diseases from spreading
  - C to prevent them from getting dirty
  - D to reduce their work load

- 19** Which enzyme is responsible for breaking down proteins into amino acids?
- A** amylase
  - B** lipase
  - C** maltase
  - D** pepsin
- 20** Which is a sign of a healthy animal?
- A** bright eyes
  - B** high fever
  - C** poor appetite
  - D** rough coat
- 21** Newly born animals must be given colostrum.  
What is the importance of colostrum?
- A** to boost the immune system
  - B** to improve muscle development
  - C** to improve vision at night
  - D** to increase fertility
- 22** Which food will provide animals with more energy?
- A** bone meal
  - B** cabbage
  - C** fish meal
  - D** sorghum
- 23** In which part of the male reproductive system are sperms stored?
- A** epididymis
  - B** scrotum
  - C** seminal vesicles
  - D** testis
- 24** Which hormone is responsible for the development of female sexual characteristics?
- A** follicle stimulating hormone
  - B** luteinising hormone
  - C** oestrogen
  - D** progesterone
- 25** Which type of disease must be reported to relevant authorities once noticed?
- A** contagious
  - B** deficiency
  - C** infectious
  - D** notifiable

- 26** Why is foot and mouth disease classified as a contagious disease?
- A** It can spread through contact with infected animals.
  - B** It causes lameness due to wounds in or between hooves.
  - C** It causes wounds and blisters on the tongue.
  - D** It lowers milk production and appetite.
- 27** What type of additional food ration should be given to animals to help produce more milk?
- A** balanced ration
  - B** maintenance ration
  - C** nutritional ration
  - D** production ration
- 28** Why does a pregnant cow need a production ration?
- A** to assist in the growth of a fetus
  - B** to keep the cow's body at a constant weight
  - C** to keep the cow's bones strong
  - D** to maintain the cow's fertility
- 29** Which nutrient is absorbed into the blood stream when carbohydrates are digested?
- A** amino acids
  - B** fatty acids
  - C** glucose
  - D** glycerol
- 30** Which term best describes two different alleles of the same gene?
- A** dominant
  - B** homozygous
  - C** heterozygous
  - D** recessive

- 31** The picture shows pasture with lucerne that can be fed to livestock on the farm.



What type of a crop is lucerne?

- A** a cereal
  - B** a leaf
  - C** a legume
  - D** a root
- 32** A farmer needs to install a water storage tank.
- What can be done to the tank in order to increase the water pressure from the tank?
- A** build a flat stand
  - B** fit large outlet pipes
  - C** fit more pipes
  - D** raise the tank
- 33** A farmer made a straight fence using wires and posts. After a few weeks, the wires began to slacken / loosen.
- What does this indicate?
- A** the droppers used are too thin
  - B** the fence is too old
  - C** the posts used are too far apart
  - D** the posts used are too close together
- 34** Which tool is used to lift up seedlings during transplanting?
- A** a hoe
  - B** a garden fork
  - C** a garden trowel
  - D** a spade
- 35** The floor of livestock buildings are normally finished with a rough surface.
- What could be a reason for leaving a rough surface?
- A** to improve water drainage
  - B** to prevent animals from slipping
  - C** to prevent animals from lying down
  - D** to prevent pathogens accumulation



36 What is the most suitable tool that can be used for cutting timber and dry poles?

- A hammer
- B pruning shear
- C saw
- D secateur

37 Why are dam walls normally built wider at the bottom and narrower at the top?

- A to withstand floods
- B to withstand run-off water
- C to resist water pressure
- D to resist wind pressure

38 The diagram shows connectors used in water fitting installations.

Which is the most suitable to connect pipes of different diameters?



A



B



C



D

39 Which of the following is **not** a variable cost?

- A electricity cost
- B fertiliser cost
- C seed cost
- D wages

40 Which economic factor will influence a farmer when choosing a specific crop to produce?

- A high demand
- B high supply
- C low demand
- D low price

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