

S7012
 AGRICULTURAL
 SCIENCE
 1 hour

II

NATIONAL EXAMINATIONS COUNCIL
 Senior School Certificate Examination

1 hour

AGRICULTURAL SCIENCE
PART I (60 MARKS)

Do **NOT** open this booklet until you are told to do so. While you are waiting, read the following instructions carefully.

This part will last for **1 hour**.

1. Use **HB** pencil throughout.
2. Complete the top section of your answer sheet as follows:
 - (a) In the space marked *Candidate's Name*, write in capital letters your **surname** followed by your **other names**.
 - (b) In the space marked *School Name* write the name of your **school**, and in the space marked *subject Name* write **AGRICULTURAL SCIENCE**.
 - (c) In the box marked *Subject Code*, write down the digits **7012** in the spaces. There are numbered spaces in line with each digit. Shade carefully the space with the same number as each digit.
 - (d) In the box marked *Examination Number*, write down your **examination number** in the spaces at the top of the box. Shade the corresponding numbered spaces in the same way as for Subject Code.
3. An example is given below. This is for a candidate whose name is **ABBAS Tunde Obi**, with **serial number 0010**, **examination number 65432100BD**, and who is offering **Mathematics I (5011)**.

National Examinations Council
SSCE ANSWER SHEET

Candidate's Name:	ABBAS Tunde Obi
School Name:	Sabamba College, Karu
Subject Name:	Mathematics I

Use HB pencil
 to complete
 this form.
 Mark like
 this—
 Erase all
 errors
 thoroughly.

SERIAL NUMBER	Subject Code	Examination Number
0 0 1 0	5 0 1 1	6 5 4 3 2 1 0 0 B D
[0] [0] [1] [0]	[5] [0] [1] [1]	[6] [5] [4] [3] [2] [1] [0] [0] [B] [D]
[1] [1] [1] [1]	[1] [1] [1] [1]	[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
[2] [2] [2] [2]	[2] [2] [2] [2]	[2] [2] [2] [2] [2] [2] [2] [2] [2] [2]
[3] [3] [3] [3]	[3] [3] [3] [3]	[3] [3] [3] [3] [3] [3] [3] [3] [3] [3]
[4] [4] [4] [4]	[4] [4] [4] [4]	[4] [4] [4] [4] [4] [4] [4] [4] [4] [4]
[5] [5] [5] [5]	[5] [5] [5] [5]	[5] [5] [5] [5] [5] [5] [5] [5] [5] [5]
[6] [6] [6] [6]	[6] [6] [6] [6]	[6] [6] [6] [6] [6] [6] [6] [6] [6] [6]
[7] [7] [7] [7]	[7] [7] [7] [7]	[7] [7] [7] [7] [7] [7] [7] [7] [7] [7]
[8] [8] [8] [8]	[8] [8] [8] [8]	[8] [8] [8] [8] [8] [8] [8] [8] [8] [8]
[9] [9] [9] [9]	[9] [9] [9] [9]	[9] [9] [9] [9] [9] [9] [9] [9] [9] [9]



PART I

Each question is followed by **FIVE** options lettered A – E. Find out the correct option for each question and shade in pencil on your answer sheet the space which bears the same letter as the option you have chosen. Give only **ONE** answer to each question. An example is given below.

The removal of small, weak plants to give room for large healthier ones to develop is called

- A. layering.
- B. pruning.
- C. staking.
- D. thinning.
- E. weeding.

The correct answer is “thinning” which is lettered D and therefore option D would be shaded.

[A] [B] [C] ~~[D]~~ [E]

Erase completely any answer you wish to change. Do all rough work on the question paper.

- | | |
|---|---|
| <p>1. Land Use Act contributes to the success of agriculture in Nigeria by</p> <ul style="list-style-type: none"> A. allocating farmlands to co-operatives. B. granting loans for land acquisition. C. initiating soil conservation techniques. D. monitoring farm settlement schemes. <u>E. providing security to land ownership.</u> | <p>2. The “Operation Feed the Nation” is an example of government agricultural</p> <ul style="list-style-type: none"> A. policy. B. programme. C. project. D. regulation. E. scheme. |
| <p>3. The first form of settled agriculture practiced by man is</p> <ul style="list-style-type: none"> A. bush fallowing. B. crop rotation. C. mono cropping. D. multiple cropping. <u>E. shifting cultivation.</u> | |

4. The main purpose of mulching is to
- decrease the evaporation of moisture from the soil.
 - discourage leaching.
 - encourage erosion menace.
 - prevent insect pests from attacking plants.
 - provide support for the plant.
5. Soil texture affects agricultural production in the following ways **EXCEPT** that it
- affects the activities of soil micro organisms.
 - affects the relative proportion of air and water in soil.
 - determines the type of soil in an area.
 - determines the level of soil fertility.
 - determines the type of crops to be grown.
6. The relative amount of sand, silt and clay in a soil sample is referred to as soil
- consistence.
 - plasticity.
 - profile.
 - structure.
 - texturé.
7. The amount of water held in the soil after excess water has drained away is termed
- field capacity.
 - gravitational.
 - hydroscopic.
 - hygroscopic.
 - surface tension.
8. 80cm³ of water was poured through a funnel containing a soil sample. At the end of 1 hour 60cm³ of water drained out. What is the percentage of water retained in the soil?
- 20
 - 25
 - 30
 - 35
 - 40
9. The upward movement of water in the soil is termed
- capillarity.
 - gravitational.
 - hygroscopic.
 - percolation.
 - porosity.
10. Which of the following is **NOT** a reason for embarking on irrigation practice?
- Encouraging disease build up
 - Encouraging the survival of crops during drought
 - Increasing crop yield
 - Making early planting possible
 - Providing moisture for plants' growth
11. Guano is an organic manure obtained from
- cattle.
 - goat.
 - poultry.
 - rabbit.
 - sheep.

12. Edaphic factors which affect agricultural production include the following **EXCEPT** soil
- moisture.
 - pH.
 - structure.
 - temperature.
 - texture.
13. Rocks are classified based on
- age.
 - mineral component.
 - mode of formation.
 - structure.
 - texture.
14. The application of heat and pressure change coal to
- gneiss.
 - graphite.
 - marble.
 - quartzite.
 - schist.
15. A plant which shows complete yellowness of leaves is deficient in
- calcium.
 - magnesium.
 - nitrogen.
 - phosphorus.
 - potassium.
16. The introduction of _____ power brought about a sizeable reduction in the work-hour requirements in the farm.
- animal
 - electricity
 - human
 - mechanical
 - solar
17. Which of the following is **NOT** considered during farmstead planning?
- Accessibility
 - Marketability
 - Orientation
 - Soil type
 - Topography
18. The main source of power on subsistence farms is
- bullock.
 - electricity.
 - man.
 - tractor.
 - windmill.
19. Combine harvester is usually used for harvesting
- groundnut.
 - pepper.
 - rice.
 - rubber.
 - tomatoes
20. Cowpea mosaic disease is caused by
- bacteria.
 - fungi.
 - nematode.
 - protozoa.
 - virus.
21. Which of these crops can be propagated by grafting?
- Cassava
 - Cowpea
 - Okra
 - Orange
 - Plantain

22. Which of the following is **NOT** a pest of maize?
- Army worm
 - Bird
 - Millipede
 - Rat
 - Stem borer
23. Formation of irregular galls on roots is a characteristic symptom of a disease caused by
- bacterium.
 - fungus.
 - nematode.
 - protozoa.
 - virus.
24. Which of the following is **NOT** a beneficial effect of weed control?
- Elimination of alternate host of pest and diseases
 - Increase in evapotranspiration
 - Increase in yield of crops
 - Reduction of crop products contamination
 - Removal of over crowding of crops
25. The study of forest trees and other related trees is known as
- agriculture.
 - floriculture.
 - horticulture.
 - olericulture.
 - silviculture.
26. The practice of supporting crop plant with sticks so as to expose their leaves to the sun is referred to as
- mulching.
 - pruning.
 - staking.
 - supplying.
 - thinning.
27. Citrus is harvested with a
- digger.
 - go-to-hell.
 - pole.
 - shovel.
 - sickle.
28. The temperature range for the production of maize is
- 10 -15°C.
 - 15 -20°C.
 - 20-25°C.
 - 25 -30°C.
 - 30 -35°C.
29. The following are necessary conditions for choosing a vegetable site **EXCEPT**
- accessibility to buyers.
 - fertility of the soil.
 - infestation with weeds.
 - nearness to water supply.
 - water logged-free soil.
30. Which of these crops does **NOT** need nursery operation?
- Citrus
 - Cocoa
 - Cotton
 - Rubber
 - Tomato

31. Which of these crops can be propagated by cutting?
- Cauliflower
 - Jute
 - C. Pepper
 - Potato
 - Rubber
32. Which of the following is a perennial crop?
- Banana
 - Cassava
 - Citrus
 - D. Cotton
 - Ginger
33. The sequence of processing cotton is
- bailing-ginning-grading-drying-crushing
 - B. bailing-ginning-grading-crushing-drying
 - drying-ginning-grading-bailing-crushing.
 - ginning-drying-grading-bailing-crushing.
 - ginning-grading-drying-bailing-crushing.
34. Which of the following is **NOT** used for identification purpose in livestock management?
- Branding
 - B. Notching
 - Shearing
 - Tagging
 - Tattooing
35. The anti-sterility vitamin in livestock nutrition is vitamin
- A.
 - B.
 - C. C.
 - D.
 - K.
36. The oestrous cycle of a doe is _____ days.
- 14-28
 - 17-21
 - 20-21
 - D. 20-28
 - 28-30
37. The disease caused by feeding disorder in animal is called
- agglutination.
 - bloat.
 - cancer.
 - D. dysentary.
 - enteritis.
38. Which of the following breeds of cattle is found predominantly in Northern Nigeria?
- Keteku
 - Kuri
 - C. Muturu
 - N'dama
 - White Fulani
39. An animal which continues to make undue noise and climbs other animals is showing signs of
- A. heat.
 - ill-health.
 - lactation.
 - ovulation.
 - parturition.

40. The site of milk synthesis and milk secretion in farm animal is called
- alveolus.
 - gland cistern.
 - small duct.
 - streak canal.
 - teat cistern.
41. Pasteurization of milk involves the use of
- cold.
 - disinfectant.
 - electricity.
 - heat.
 - sunshine.
42. Lactation can be stimulated in female animal by a decrease in the level of _____ hormone.
- lutening
 - oestrogen
 - oxytocin
 - progesterone
 - relaxin
43. Which of the following farm animals requires the use of wallows in their pens?
- Cattle
 - Goat
 - Pig
 - Rabbit
 - Sheep
44. Which of the following factors will **NOT** be considered in determining the type of ration fed to an animal?
- Age of the animal
 - Availability of feed stuff
 - Physiological state of the animal
 - Purpose for which animal is kept
 - Size of the animal
45. Which of the following is **NOT** a condition necessary for siting a fish pond?
- Adequate water supply
 - Availability of fast growing fingerlings
 - Nearness to the market
 - Relative humidity of the area
 - Topography of the area
46. Fry refers to the young of
- duck.
 - fish.
 - rabbit.
 - sheep.
 - turkey.
47. The gestation period of a rabbit is _____ days.
- 27
 - 30
 - 113
 - 147
 - 283

48. Fowl is a monogastric animal because it
- digests fibres and cellulose.
 - does not chew-the-cud at all.
 - has a four stomach compartments.
 - regurgitates digestible feed always.
 - utilizes non-protein nitrogen substances.
49. Which of these diseases is caused by virus?
- Anthrax
 - Aspergilosis
 - Brucellosis
 - Rinder pest
 - Tuberculosis
50. Which of the following is **NOT** a component of balanced diet in livestock management?
- Carbohydrate
 - Fat and oil
 - Protein
 - Sucrose
 - Vitamin
51. Which of the following is an enzyme that converts fats and oil to fatty acids and glycerol?
- Erepsin
 - Lactose
 - Lipase
 - Maltose
 - Sucrose
52. Which of the following is **NOT** an economic importance of liver fluke? It
- causes abdominal pains
 - causes bilharzia
 - causes liver rot
 - leads to loss of blood
 - obstructs the bile ducts
53. Which of the following is a pasture legume?
- Andropogon gayanus
 - Cynodon dactylon
 - Imperata cylindrical
 - Panicum maximum
 - Stylosanthes gracitis
54. The following are fixed assets **EXCEPT**
- cash at hand.
 - farm tools.
 - land.
 - machines.
 - vehicle.
55. The record which contains the assets and liability of a farm is called
- farm diary.
 - farm inventory.
 - input record.
 - output record.
 - production record.
56. The annual depreciation of a tractor purchased in year 2000 at the cost of ₦800,000 and sold off in 2008 at the cost of ₦400,000 is
- 20,000.
 - 30,000.
 - 40,000.
 - 50,000.
 - 60,000.

57. Which of the following is **NOT** a marketing function?

- A. Advertisement
- B. Finance
- C. Packaging
- D. Storage
- E. Transportation

58. Which of the following is both a visual and spoken form of extension method?

- A. Bulletin
- B. Magazine
- C. Method demonstration
- D. Office call
- E. Poster

59. The first stage that an individual moves through in terms of adopting improved practice is

- A. adoption.
- B. awareness.
- C. evaluation.
- D. interest.
- E. trial.

60. Which of the following is a mass media method in extension?

- A. Debate
- B. Excursion
- C. Lecture
- D. Pamphlet
- E. Symposium

S7012
AGRICULTURAL
SCIENCE
1hr. 30 mins.

II

Name:.....

Examination Number:.....

NATIONAL EXAMINATIONS COUNCIL
Senior School Certificate Examination

1hr. 30 mins.

AGRICULTURAL SCIENCE
PART II (80 MARKS)

Do NOT start part II until you are told to do so. While you are waiting, read the following instructions carefully.

Write your **Name** and **Examination Number** in the spaces provided at the top right-hand corner of this booklet.

This part consists of **FIVE** sections: Sections **A, B, C, D** and **E**.

Answer any **FIVE** questions only. **ONE** from each section.

Write your answers in ink or blue/black biro in your answer booklet.

Include labelled diagrams if they help make the answers clearer.

Part II will last for **1½ hours**.

SECTION A

Answer **ONE** question from this Section

1. (a) List **SIX** provisions of the Land Use Act of 1978. (6marks)
- (b) Mention **THREE** advantages and **THREE** disadvantages of Land Use Act. (6marks)
- (c) (i) Define Land tenure. (2marks)
(ii) List **TWO** advantages of communal land tenure. (2marks)
2. (a) Enumerate **EIGHT** problems of agricultural mechanization in Nigeria. (8marks)
- (b) Mention **TWO** functions each of these farm implement:-
(i) ridger. (2marks)
(ii) disc harrow. (2marks)
(iii) combine harvester. (2marks)
(iv) spring-tine cultivator. (2marks)

SECTION B

Answer **ONE** question from this Section

3. (a) In a tabular form, state **FIVE** differences between sand and clay soils. (10marks)
- (b) List **TWO** physical properties of soil. (2marks)
- (c) Mention **FOUR** importance of soil texture in agriculture. (4marks)
4. (a) Name **FOUR** materials that can be used to correct soil acidity. (4marks)
- (b)i List **TWO** characteristics of metamorphic rock. (2marks)
ii. Mention **FOUR** economic importance of rock in agriculture. (4marks)
- (c) Explain the following terms:-
(i) hygroscopic water. (2marks)
(ii) capillary water. (2marks)
(iii) gravitational water. (2marks)

SECTION C

Answer **ONE** question from this Section

5. (a) (i) Mention **FOUR** stages in the processing of cocoa. (4marks)
(ii) List **THREE** cultural practices carried out in the production of cocoa. (3marks)
- (b) Enumerate **THREE** diseases that affect the production of cowpea. (3marks)

- (c) Discuss maize rust disease under the following headings:
- (i) Causal organism (1mark)
 - (ii) Mode of transmission (1mark)
 - (iii) **TWO** symptoms (2marks)
 - (iv) **TWO** control measures. (2marks)
6. (a) State **FOUR** effects of diseases on crop production. (4marks)
- (b) Discuss the following methods of controlling diseases in crops:
- (i) biological control method. (2marks)
 - (ii) cultural control method. (2marks)
- (c) List **FOUR** side effects of chemical control method of controlling pest. (4marks)
- (d) Explain the following forest management practices:
- (i) selective exploration. (2marks)
 - (ii) forest regulation. (2marks)

SECTION D

Answer **ONE** question from this Section

- (7) (a) Enumerate **FIVE** ways of maintaining a fish pond. (5marks)
- (b) State **FIVE** importance of fish farming. (5marks)
- (c) List **SIX** factors that could predispose animals to diseases. (6marks)
- (8a) (i) What is a range land? (2marks)
- (ii) Mention **TWO** characteristics of a range land. (2marks)
- (iii) Give **TWO** reasons for the need of a grass-legume mixture in a range land. (2marks)
- (b) Describe the process of egg formation in the following parts of the reproductive system of a fowl:
- (i) Infundibulum (2marks)
 - (ii) Magnum (2marks)
 - (iii) Isthmus (2marks)
 - (iv) Uterus (2marks)
- (c) List **TWO** minerals needed for the formation of egg shell. (2marks)

SECTION E

eshell

Answer **ONE** question from this Section

- (9a) (i) Define agricultural credit (2marks)
 (ii) State **TWO** differences between agricultural credit and agricultural subsidy. (2marks)
 (iii) Mention **FOUR** farm inputs commonly subsidized by government (4marks)
- (b) Mention **THREE** disadvantages of agricultural co-operative societies. (3marks)
- (c) List **FIVE** reasons why farmers find it difficult to obtain bank loans. (5marks)
10. Assuming the farmers in a village were categorized according to their rate of adoption of new ideas as follows:-
- | | |
|-----------------|----|
| Innovators: | 10 |
| Early adopters: | 10 |
| Late adopters: | 60 |
| Never adopters: | 20 |
- (a) (i) Calculate the ratio of late adopters to early adopters (1mark)
 (ii) State **FIVE** reasons for the high number of late adopters. (5marks)
 (iii) Mention **TWO** reasons for the low ratio of early adoptions. (2marks)
- (b) State **FOUR** contributions of an extension agent to the success of Agriculture in Nigeria. (4marks)
- (c) Mention **FOUR** problems that face the success of extension services in Nigeria. (4marks)

S7012
AGRICULTURAL
SCIENCE
2½ hours

II

Name:.....

Examination Number:.....

NATIONAL EXAMINATIONS COUNCIL
Senior School Certificate Examination

2½ hours

AGRICULTURAL SCIENCE
PARTS I AND II

*Do **NOT** open this booklet until you are told to do so. While you are waiting, read the following instructions carefully.*

Write your **Name** and **Examination Number** in the spaces provided at the top right-hand corner of this booklet.

This paper consists of Parts I and Part II. Part I will last for **1 hour**.

Answer Part I on your objective test answer sheet. Instructions on how to do this are given on the next page. On completion of Part I, the objective test answer sheet will be collected.

Do NOT start Part II until you are told to do so.

Part II will last for **1½ hours**. Answers to Part II are to be written in your answer booklet.

PART I

Each question is followed by **FIVE** options lettered A – E. Find out the correct option for each question and shade in Pencil on your answer sheet the space which bears the same letter as the option you have chosen. Give only **ONE** answer to each question. An example is given below.

The removal of small, weak plants to give room for large healthier ones to develop is called

- A. layering.
- B. pruning.
- C. staking.
- D. thinning.
- E. weeding.

The correct answer is “thinning” which is lettered D and therefore answer D would be shaded.

[A] [B] [C] [D] [E]

Erase completely any answer(s) you wish to change. Do all rough work on this question paper.

1. Which of these factors does **NOT** influence land use in Nigeria?

- A. Climate
- B. Labour
- C. Population pressure
- D. Soil type
- E. Topography

2. Important features of modern agriculture are _____ and _____.

- A. rationalization, globalization
- B. specialization, efficiency
- C. mobilization, stabilization
- D. selection, introduction
- E. modernization, industrialization

3. The following are roles of science and technology in agricultural development **EXCEPT**

- A. development of modern farm machine.
- B. establishment of susceptible breeds of livestock.
- C. manufacture of better agro-chemicals.
- D. production of new varieties of crops.
- E. provision of good transport network.

4. The following are post planting practices **EXCEPT**
- harvesting.
 - processing.
 - ridging.
 - staking.
 - weeding.
5. An area where most of the farm buildings and structures are constructed as the focal point of administration is called farm
- building.
 - house.
 - site.
 - stead.
 - structure.
6. The importance of drainage is that it
- applies water artificially to the soil.
 - improves the aeration of the soil.
 - increases erosion rate.
 - increases soil salinity.
 - reduces soil water.
7. The instrument used to mark out straight lines in survey is
- chain pin.
 - gunter's chain.
 - measuring tape.
 - ranging pole.
 - theodolite.
8. Which of these is correct when spraying agro-chemicals on the farm?
- Contamination of the environment
 - Spray in windy weather
 - Spray near the fire
 - Spray when rain is falling
 - Wear protective covers
9. Which of these rocks is stratified and shows presence of fossils?
- Coal
 - Gneiss
 - Granite
 - Pumice
 - Slate
10. Rock formed as a result of changes in existing rock due to intense pressure, temperature and compaction is called
- extrusive.
 - igneous.
 - intrusive.
 - metamorphic.
 - sedimentary.

11. The conversion of ammonium salts to soil trioxonitrate(V) is called
- ammonification.
 - mineralization.
 - nitrate formation.
 - nitrification.
 - nitrogen formation.
12. The rate of water erosion is influenced by _____ and _____
- infiltration, evaporation, dispersion rates.
 - dispersion, infiltration, permeability rates.
 - texture, solution, oxidation rates.
 - transportation, abrasion, hydrolysis
 - oxidation rate, permeability, gravity.
13. The conventional method of classifying rocks is based on
- biological composition.
 - chemical composition.
 - mode of origin.
 - mode of transformation.
 - physical composition.
14. Ice causes rock weathering
- by dissolving some minerals in disintegrated rock fragments.
 - by exerting an abrasive action on rock fragments.
 - through chemical alteration of rock minerals.
 - through movement of large fragments against the major rock.
 - through the processes of expansion and contraction.
15. Silviculture is the study of raising
- flowers.
 - forest trees.
 - pastures.
 - seeds.
 - weeds.
16. Excess nitrogen in the soil leads to
- delayed crop maturation.
 - restricted root development.
 - short internodes.
 - stunted growth.
 - yellowing of leaves.
17. Which of the following is **NOT** a way by which soil water is lost?
- Drainage
 - Erosion
 - Evaporation
 - Photosynthesis
 - Transpiration

18. Fertilizers that usually contain one nutrient which can be used directly by plants are commonly called _____ fertilizer.

- A. compound
- B. inorganic
- C. mixed
- D. organic
- E. straight

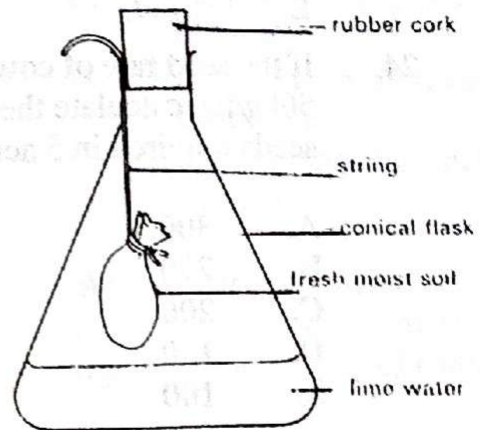
19. The most important soil nutrient required for root development is

- A. boron.
- B. nitrogen.
- C. phosphorus.
- D. potassium.
- E. zinc.

20. What happens to the nitrogen and sulphur contents of vegetation when burning is used as a means of land clearing? They

- A. activate soil microbes.
- B. are released and lost as gases.
- C. are released into the soil thus increasing the nutrients of the soil.
- D. raise the P^H of an acid soil.
- E. remain in ash as nitrates and sulphates.

Use the diagram below to answer question 21.



21. The aim of the experiment is to determine

- A. the texture of fresh and heated soil.
- B. what happens to fresh and heated soils in the presence of lime water.
- C. the presence of living organisms in soils.
- D. what happens when soil is heated.
- E. soil colour.

22. Which of these minerals is essential for the formation of chlorophyll in green plants?

- A. Boron
- B. Calcium
- C. Magnesium
- D. Sodium
- E. Zinc

23. Crops with scented and coloured flowers are often pollinated by

- A. animals.
- B. hand.
- C. insects.
- D. water.
- E. wind.

24. If the seed rate of cowpea is 50kg/ha, calculate the quantity of seeds required in 5 acres of land.

- A. 300
- B. 250
- C. 200
- D. 150
- E. 100

25. Mealy bug belongs to the order

- A. Orthoptera.
- B. Isoptera.
- C. Coleoptera.
- D. Hemiptera.
- E. Lepidoptera.

26. If the seed rate per hole in cowpea is two seeds and the spacing 80cm by 40cm, calculate the expected plant population per hectare.

- A. 62,500
- B. 60,500
- C. 55,500
- D. 50,500
- E. 45,500

27. The vector for maize streak is

- A. aphid.
- B. beetle.
- C. house fly.
- D. leafhopper.
- E. white fly.

28. Which of these is NOT a legume pasture?

- A. Calopogonium mucunoides
- B. Digitaria decumbens
- C. Phaseolus atropurpureus
- D. Pureria phaseoloides
- E. Styztobium deeringianum

29. The larvae of stem borers can best be controlled by the application of

- A. aerosols.
- B. contact insecticides.
- C. Fernalan D.
- D. pelleted pesticides.
- E. systemic insecticides.

30. Pre-nursery spacing for oil palm is

- A. 16.50cm x 16.50cm.
- B. 13.60cm x 13.60cm.
- C. 10.60cm x 10.60cm.
- D. 7.60cm x 7.60cm.
- E. 4.50cm x 4.50cm.

31. Yellowing of leaves in vegetables can be corrected by the application of

- A. carbon.
- B. hydrogen.
- C. lime.
- D. sodium.
- E. urea.

32. Propping is a farming activity carried out in _____ production.

- A. cassava
- B. cocoa
- C. coffee
- D. plantain
- E. yam

33. The commonest pest of yam tuber in the farm is
- bat.
 - beetle.
 - bird.
 - goat.
 - rat.
34. Which of these is NOT a negative effect of deforestation in Nigeria?
- Irregular rainfall
 - Leads to regeneration
 - Promotion of soil erosion
 - Reduces activities of soil organisms
 - Results to desertification
35. Fowl pox of poultry is seen as blisters on the
- comb.
 - feather.
 - legs.
 - toes.
 - wings.
36. Which of these breeds of cattle produces more milk?
- Keteku
 - Muturu
 - Ndama
 - Red bororo
 - White Fulani
37. The production of colostrum last for _____ day(s)
- 1 - 2
 - 3 - 4
 - 5 - 6
 - 7 - 8
 - 9 - 10
38. Fertilizers are periodically added to fish pond to serve as
- buffering agent for the soil.
 - food for the fishes.
 - manure for the plankton to grow.
 - manure to make fishes grow fast.
 - neutralizing element for the soil.
39. Which of the following does NOT form part of the male reproductive system of cattle?
- Oviduct
 - Penis
 - Sperm duct
 - Testicle
 - Vas deferens
40. Possible abnormalities in egg formation include the following EXCEPT _____ egg.
- blood clotted
 - brown tainted
 - double yoked
 - soft shelled
 - yolkless
41. The following are to be considered in establishing a poultry farm EXCEPT
- availability of market.
 - cost and availability of stock.
 - cost and availability of feeds.
 - purpose of production.
 - size of the neighbouring farms.

42. These are examples of additives in livestock feeds **EXCEPT**
- antibiotics.
 - antioxidants.
 - common salt.
 - dried brewers grains.
 - premix.
43. Animal feeds can be classified into concentrates, _____ and _____.
- hay, silage
 - roughages, straw
 - roughages, supplement
 - hay, supplement
 - silage, supplement
44. Complex organic compound present in food stuff and required in small quantities by farm animals is called
- fats and oil.
 - mineral.
 - protein.
 - starch.
 - vitamin.
45. The combination of all the food nutrients in such a way as to meet the nutritional requirement of a particular animal is known as _____ ration.
- balanced
 - compounded
 - efficient
 - equilibrium
 - formulated
46. When formulating ration, the following are factors to be considered **EXCEPT**
- age of the animal.
 - availability of feedstuff.
 - cost of feedstuff.
 - incidence of pests and diseases.
 - physiological state of the animal.
47. The process of preventing animal diseases from being introduced into a country is known as
- culling.
 - innoculation.
 - insemination.
 - isolation.
 - quarantine.
48. Which of the following is **NOT** an ectoparasite?
- Flea
 - Liver fluke
 - Louse
 - Mite
 - Tick
49. Acaricides are chemicals used to control
- insects.
 - rodents.
 - ticks.
 - weeds.
 - worms.

50. An example of a cartilaginous fish is
- carp.
 - dolphin.
 - herring.
 - mudfish.
 - tilapia.
51. The causal organism of mastitis in farm animals is
- bacillus antracis.
 - brucella abortus.
 - erysipelothrix insidiosa.
 - streptococci agalactial.
 - tubercle bacilli.
52. A fowl with blood stained faeces is likely to be infected by
- coccidiosis.
 - fowl cholera.
 - fowl pox.
 - newcastle.
 - trypanosomiasis.
53. Which of these is **NOT** a current capital?
- Current debts and bills receivable
 - Growing crops and livestock
 - Cash at hand and cash in the bank
 - Harvested crops and fertilizers
 - Fittings and food
54. Which of the following is **NOT** a characteristic of human labour?
- It is subject to diminishing returns
 - May decide to work for long or not to work
 - Only supplied by man
 - Labour suppliers sometimes have choice
 - Skilled labour is not subject to adequate training
55. Which of the following is **MOST** susceptible to diminishing return?
- Capital
 - Cash at hand
 - Entrepreneurship
 - Labour
 - Land
56. A loan that matures in three or more years is known as _____ loan.
- long term
 - short term
 - medium term
 - average term
 - emergency
57. Which of these comprise strictly group methods of extension?
- Lecture, symposium, discussion and hand-out
 - Lecture, symposium, workshop and telephone calls
 - Meetings, field days, lecture and workshop
 - Meetings, field days, tours and exhibitions
 - Symposium, lecture, field days and farm visits

58. The following are stages of adopting improved practices in extension **EXCEPT**

- A. awareness.
- B. evaluation.
- C. interest.
- D. planning.
- E. trial.

59. Which of the following is the correct sequence of information dissemination activities?

- A. Extension Worker-Research Station - Rural Farmers
- B. Extension worker – Rural farmers – Research station
- C. Research Station – Extension worker – Rural farmers
- D. Rural farmers – Research station – Extension worker
- E. Research station – Rural farmer- Extension worker

60. The oldest means of disseminating new ideas and techniques to the peasant farmer is by the use of

- A. cinema.
- B. internet.
- C. pamphlet.
- D. radio.
- E. television.

SECTION A

Answer **ONE** question from this section

- 1(a) Enumerate **SIX** Agricultural Research Institutes in Nigeria and their locations. (6 marks)
- (b) Identify **FOUR** ways in which inadequate processing facilities have affected agricultural development in Nigeria. (4 marks)
- (c) List **SIX** problems of agricultural development in Nigeria. (6 marks)
- 2(a) State **FIVE** maintenance practices each of tractors on
- (i) daily basis. (5 marks)
 - (ii) routine basis. (5 marks)
- (b) Mention **THREE** types of farm structures and buildings. (3 marks)
- (c) Discuss **THREE** maintenance practices of farm structures and buildings. (3 marks)

SECTION B

Answer **ONE** question from this section

- 3(a) Differentiate between a rock and soil. (2 marks)
- (b) State **FIVE** factors that affect soil formation. (5 marks)
- (ci) Mention **TWO** examples of each of the following classes of rocks;
- (i) Igneous rock (2 marks)
 - (ii) Sedimentary rock (2 marks)
 - (iii) Metamorphic rock (2 marks)
- (ii) State **TWO** agents of each of the following processes of rock weathering:
- (i) Physical process (1 mark)
 - (ii) Chemical process (1 mark)
 - (iii) Biological process (1 mark)

- 4(a) Define Irrigation. (2 marks)
- (b) List **FOUR** sources of water for irrigation. (2 marks)
- (c) Give **FOUR** reasons why irrigation schemes are necessary in crop production. (4 marks)
- (d) State **TWO** similarities and **THREE** differences between sprinkler and surface irrigation. (8 marks)

SECTION C

Answer **ONE** question from this section

- 5(a) Define the following terms:
- (i) climate
 - (ii) rain fall
 - (iii) temperature and
 - (iv) relative humidity. (8 marks)
- (b) State **FOUR** effects each of rainfall and temperature on Agricultural Production. (8 marks)
- 6(a) Differentiate between a disease and pest. (2 marks)
- (bi) Mention **SIX** economic effects of insect pest. (6 marks)
- (bii) State **EIGHT** side effects of the various preventive and control measures of diseases and pest of crops. (8 marks)

SECTION DAnswer **ONE** question from this section

- 7(a) Explain the term ration. (2 marks)
- (b) Describe the following general consideration of rationing: (2 marks)
- i. Bulk (2 marks)
 - ii Palatability (2 marks)
 - iii Familiarity (2 marks)
- (c) i. Name **TWO** classes of livestock feeds. (2 marks)
- ii List **THREE** characteristics of the classes mentioned in (ci) above. (6 marks)
8. Discuss trypanosomiasis disease in cattle under the following headings:
- (a) causative agent (1 mark)
 - (b) mode of transmission (3 marks)
 - (c) **THREE** symptoms (3 marks)
 - (d) **FOUR** preventive/control measures (4 marks)
 - (e) Mention **TWO** resistant breeds and **THREE** susceptible breeds of cattle to trypanosomiasis. (5 marks)

SECTION EAnswer **ONE** question from this section

- 9(a) Differentiate between agricultural financing and farm credit. (3 marks)
- (b)i List **SIX** sources of farm credit. (3 marks)
- ii State **ONE** major problem associated with each of the sources mentioned in (bi) above. (6 marks)
- (c) A farmer borrowed N25, 000 from the bank at the rate of 2 ½ % per annum for two years, calculate the interest payable. (4 marks)
- 10(a). Discuss briefly **THREE** methods of disseminating agricultural information to the farmers. (6 marks)
- (b) State **SIX** problems of Agricultural Extension in Nigeria. (6 marks)
- (c) Mention **FOUR** steps of diffusion process of new ideas and techniques to farmers. (4 marks)