

1. To facilitate mechanical harvesting of cereals, it is better to
  - A. make all of them disease-resistant.
  - B. ensure that they are free from pest attack.
  - C. ensure they all have uniform height.
  - D. make sure they are early-maturing.
2. One of the problems facing agricultural development in West Africa is
  - A. inadequate financing.
  - B. unavailability of productive land.
  - C. low income of consumers.
  - D. inadequacy of industries.
3. What action of government may be considered as granting of subsidies to farmers?
  - A. Giving low interest loans to farmers
  - B. Providing hire purchase services
  - C. Supplying agrochemicals at reduced cost
  - D. Providing free non-formal education to farmers
4. Which of the following are advantages of the communal land ownership system?
  - I. Every member of the community has a piece of land on which to farm
  - II. Co-operative farming is possible under this system
  - III. Large scale farming is encouraged
  - IV. Land can be used as a security for loans
  - A. I and II only
  - B. II and III only
  - C. I and III only
  - D. III and IV only

5. A socio-economic factor which affects the availability of land for agricultural use in West Africa is
- soil type.
  - population growth.
  - rainfall distribution.
  - working capital.
6. Which of the following cropping systems would lead to continuous sustenance of soil fertility?
- Crop rotation
  - Land rotation
  - Monoculture
  - Monocropping
- I and II only
  - I and III only
  - II and III only
  - I, II and III only
7. Which of the following factors affects the onset of flowering in crops?
- Atmospheric pressure
  - Wind
  - Day length
  - Rainfall
8. Marble is a metamorphic rock formed from
- limestone.
  - quartzite.
  - shale.
  - schist.
9. Which of the following statements **best** describes sedimentary rocks?
- Pre-existing rocks in which the original mineral has undergone change
  - Weathered rock transported by wind to other places
  - Molten magma which has cooled down and solidified
  - Rocks formed from breaking, deposition and re-cementation of pre-existing rocks
10. The rock weathering process involving the equation:  $\text{CaCO}_3 + \text{H}_2\text{CO}_3 \rightarrow \text{Ca}(\text{HCO}_3)_2$  is called
- carbonation.
  - hydration.
  - hydrolysis.
  - oxidation.

11. When compost is added to sandy soil, it
- reduces the activities of living organisms.
  - increases the porosity of the soil.
  - increases water holding capacity of the soil.
  - decreases the soil acidity.
12. Soils can become acidic as a result of the continuous application of
- single superphosphate.
  - sulphate of ammonia.
  - muriate of potash.
  - NPK 15:15:15.
13. Which of the following species of bacteria lives symbiotically in root nodules of legumes?
- Azotobacter
  - Clostridium
  - Nitrobacter
  - Rhizobium
14. Plant nutrients are restored during the fallow period through
- reduced soil erosion.
  - accumulation of soil organic matter.
  - reduced evaporation from the soil.
  - accumulation of farmyard manure.
15. The processes by which animals release carbon dioxide into the air are
- respiration and decay.
  - respiration and ammonification.
  - nitrification and decay.
  - denitrification and ammonification.
16. Which of the following practices leads to land degradation in the savanna zones of West Africa?
- Constant annual bushfires
  - Overgrazing of grassland
  - Application of cattle manure
  - Cutting of woody species for fuel wood
- I, II and III only
  - I, II and IV only
  - II, III and IV only
  - I, II, III and IV
17. A 100 kg NPK 15 : 15 : 15 compound fertilizer has a filler make-up weight of
- 30 kg.
  - 40 kg.
  - 45 kg.
  - 55 kg.

18. One of the **main** disadvantages of mechanical tillage is the
- A. low initial cost of equipment.
  - B. need for special training before machines can be used.
  - C. use of heavy equipment leading to soil compaction.
  - D. use of foreign exchange to purchase machine parts.
19. Which of the following factors affect the work rate of draught animals?
- I. Feed intake
  - II. Breed of animal
  - III. Harness for hitching
  - IV. Height of animal
- A. I, II and III only
  - B. I, II and IV only
  - C. II, III and IV only
  - D. I, II, III and IV
20. Which of the following features could lead to wrong reading on a prismatic compass?
- A. A big tree
  - B. Wind direction
  - C. A pond
  - D. Magnetic attraction
21. Which of the following steps gives a **correct** sequence for surveying a farmstead?
- A. Reconnaissance → preliminary survey → mapping
  - B. Mapping → reconnaissance → preliminary survey
  - C. Preliminary survey → reconnaissance → mapping
  - D. Preliminary survey → mapping → reconnaissance
22. The characteristic of draught animals which does **not** influence traction effort is
- A. age.
  - B. sex.
  - C. breed of animal.
  - D. meat quality.
23. The branch of horticulture that deals with the production of vegetables is called
- A. *pathology*.
  - B. *olericulture*.
  - C. *floriculture*.
  - D. *pomology*.

24. Pruning is carried out to
- I. control the size of the plants.
  - II. obtain clean and attractive fruits.
  - III. ensure correct spacing of trees.
- A. I and II only  
B. I and III only  
C. II and III only  
D. I, II and III
25. Which of the following characteristics is **not** true of tree species used in alley cropping?
- A. Shallow rooting system  
B. Regenerate rapidly after pruning  
C. Excellent canopy formation  
D. Capable of fixing atmospheric nitrogen
26. Insect damage to crops takes the form of
- A. chewing, grinding and sucking.  
B. grinding, piercing and chewing.  
C. piercing, sucking and grinding.  
D. chewing, sucking and piercing.
27. One disadvantage of vegetative propagation is that
- A. fruits are small in size.  
B. viral diseases are transferred to offspring.  
C. plants are true to type.  
D. plants take a long time to mature.
28. Which of the following factors should be considered when sowing seeds in the field?
- I. Time of sowing
  - II. Plant density
  - III. Depth of sowing
  - IV. Method of sowing
- A. I and II only  
B. I, II and III only  
C. III and IV only  
D. I, II, III and IV
29. Which of the following groups of crops requires *winnowing* during processing?
- A. Fruits  
B. Cereals  
C. Tubers  
D. Vegetables

30. A farmer who plants African Marigold between his crops has the intention of controlling
- bacteria.
  - viruses.
  - fungi.
  - nematodes.
31. If the spacing of a crop is  $3.6\text{ m} \times 4.5\text{ m}$ , determine the crop population per hectare.
- 769
  - 617
  - 494
  - 408
32. An example of a piercing and sucking insect-pest of crops is a
- mealy bug.
  - grasshopper.
  - weevil.
  - termite.
33. If rows are spaced  $1.0\text{ m}$  apart with one plant per stand, determine the spacing between stands in order to obtain a plant population of 40,000/ha.
- $0.25\text{ m}$
  - $0.40\text{ m}$
  - $0.50\text{ m}$
  - $1.00\text{ m}$
34. Calculate the number of yam setts planted at a spacing of  $1.0\text{ m}$  by  $1.0\text{ m}$  on a hectare of land.
- 1,000 setts
  - 2,500 setts
  - 5,000 setts
  - 10,000 setts
35. Some plants are suitable for decorating living rooms because of their
- ability to endure low light intensity.
  - low respiration rate.
  - ability to retain water.
  - low resistance to diseases.
36. *Capping* and *Staking* are important cultural practices in the cultivation of
- sweet potatoes.
  - tomatoes.
  - yams.
  - groundnuts.
37. An important function of mulching is that it
- increases soil temperature.
  - provides soil with nutrients.
  - conserves moisture in the soil.
  - increases rate of evaporation.

38. The removal of sheath on maize cob is referred to as
- winning.
  - shelling.
  - dehusking.
  - milling.
39. Which of the following sequences describes the steps in making hay?
- Cut, dry and bale
  - Dry, ferment and bale
  - Cut, wilt and bale
  - Bale, dry and cut
40. One disadvantage of using bamboo troughs as waterers for poultry is that they
- can be chewed up by the birds.
  - are susceptible to algal growth.
  - break easily when they fall.
  - contaminate the water put in them.
41. The characteristic odour in billy goats can be removed through
- docking.
  - castrating.
  - drenching.
  - dipping.
42. A cattle breed in West Africa tolerant to trypanosomiasis is
- White Fulani.
  - Sokoto Gudali.
  - N'dama.
  - Friesian.
43. A consequence of pasture littered with polythene materials is that
- animals could slip and fall frequently.
  - the alimentary canal of farm animals could be blocked.
  - the material could poison the animals.
  - it improves the quality of the pasture.
44. Which of the following statements about *colostrum* is **false**? It is
- an evaporated milk.
  - the first milk produced after parturition.
  - high in antibodies.
  - rich in proteins and vitamins.
45. Meat obtained from cattle of less than one year old is called
- beef.
  - chevon.
  - veal.
  - pork.

46. Which of the following characteristics is **not** important in beef cattle production?

- I. Increased butter-fat percentage
- II. High feed conversion efficiency
- III. High yield of lean meat

- A. I only
- B. I and II only
- C. II and III only
- D. I, II and III

47. The following are systems of mating in farm animals:

- I. stud mating;
- II. artificial insemination;
- III. pen mating;
- IV. herd mating.

- A. I only
- B. I and II only
- C. I, II, III and IV
- D. I, II and III only

48. A disease of rabbit caused by a protozoan is

- A. infectious bronchitis.
- B. coccidiosis.
- C. anthrax.
- D. milk fever.

49. The common name of *Axonopus compressus* is

- A. carpet grass.
- B. spear grass.
- C. guinea grass.
- D. bahama grass.

50. Which of the following groups of cattle are tropical breeds?

- A. Friesian, Kuri and White Fulani
- B. N'dama, Sokoto Gudali and Muturu
- C. Kuri, Sokoto Gudali and Jersey
- D. Muturu, N'dama and Friesian

51. The following substances are excretory products in farm animals **except**.

- I. blood.
- II. sweat.
- III. urine.

- A. I only
- B. II only
- C. III only
- D. II and III only



52. The following are signs of ill-health in farm animals **except**
- A. uncoordinated gait.
  - B. dull eyes.
  - C. high body temperature.
  - D. increased appetite.
53. Which of the following factors should be considered when building a rabbit hutch?
- I. Safety and comfort of rabbits
  - II. Ease of maintenance and cleaning
  - III. Day length
- A. I and II only
  - B. I and III only
  - C. II and III only
  - D. I, II and III
54. Heat in farm animals can be detected by the following signs **except**
- A. redness of the vulva.
  - B. low body temperature.
  - C. loss of appetite.
  - D. frequent urination.
55. Which of the following organs forms a barrier between an animal and its external environment?
- A. Urinary bladder
  - B. Stomach
  - C. Lung
  - D. Skin
56. Demand is said to be price elastic, if the absolute value of price elasticity of demand is
- A. greater than one.
  - B. less than one.
  - C. one.
  - D. zero.
57. Which of the following activities are functions of agricultural marketing boards in West Africa?
- I. Price stabilization within seasons
  - II. Harvesting of the farm produce
  - III. Grading and standardization of produce
  - IV. Market research for produce
- A. I and II only
  - B. II and III only
  - C. II, III and IV only
  - D. I, III and IV only

The table below shows the supply schedule for soyabean by three producers.

Price per kg (₦)	Quantity supplied by Adamu (kg)	Quantity supplied by Koffi (kg)	Quantity supplied by Koroma (kg)
5,000.00	37,500.00	22,500.00	17,500.00
4,000.00	35,000.00	20,000.00	15,000.00
3,000.00	30,000.00	15,000.00	10,000.00
2,000.00	20,000.00	10,000.00	5,000.00
1,000.00	5,000.00	2,000.00	1,000.00

Use the information provided in the table to answer questions 58 and 59.

58. Determine the market supply when the price is ₦4,000.00.

- A. 77,000 kg
- B. 70,000 kg
- C. 55,000 kg
- D. 35,000 kg

59. Calculate the percentage change in the total quantity supplied if the price decreases from ₦5,000.00 per kg to ₦3,000.00 per kg.

- A. 85%
- B. 71%
- C. 41%
- D. 29%

60. The **most** important objective of agricultural extension education is to

- A. organise farmers for research work.
- B. help farmers to produce more efficiently.
- C. mobilize resources for town development projects.
- D. help farmers to plan their families well.

SECTION A

Answer one question only from this section.

1. (a) State **four** benefits of agriculture to the economy of West African countries. [ 4 marks ]
  - (b) Enumerate **four** functions of agro-service centres in your country. [ 4 marks ]
  - (c) Outline **four** routine tractor maintenance practices. [ 4 marks ]
  - (d) State **two** functions of **each** of the following parts of the farm tractor:
    - (i) *three-point linkage*;
    - (ii) *hydraulic lever*. [ 4 marks ]
- 
2. (a) Explain the term *farm mechanization*. [ 2 marks ]
  - (b) Mention **three** advantages and **three** disadvantages of farm mechanization. [ 6 marks ]
  - (c) Give **two** merits of the use of draught animals in farm operations. [ 2 marks ]
  - (d) Outline **three** roles of science and technology in agricultural development under the following headings:
    - (i) *pest and disease control*;
    - (ii) *meteorology and climatology*. [ 6 marks ]

SECTION B

Answer **one** question **only** from this section.

3. (a) Mention **two** sources of irrigation water. [ 2 marks ]
- (b) Enumerate **two** advantages and **two** disadvantages of irrigating farmlands. [ 4 marks ]
- (c) List **two** ways by which the soil loses nutrients. [ 2 marks ]
- (d) Give **two** reasons for manuring in crop production. [ 2 marks ]
- (e) State **two** ways by which **each** of the following environmental factors affect agricultural production:
- (i) *temperature*;
  - (ii) *soil micro-organisms*;
  - (iii) *wind*.
- [ 6 marks ]
4. (a) List **three** edaphic factors that influence crop growth. [ 3 marks ]
- (b) Explain the following terms as used in soil and water conservation:
- (i) *gravitational water*;
  - (ii) *hygroscopic water*.
- [ 4 marks ]
- (c) State **two** deficiency symptoms of **each** of the following nutrient elements in crops:
- (i) *nitrogen*;
  - (ii) *phosphorus*;
  - (iii) *potassium*.
- [ 6 marks ]
- (d) State **three** benefits derived from draining farmlands. [ 3 marks ]

SECTION C

Answer **one** question **only** from this section.

5. (a) Define the term *nursery* as used in crop production. [ 2 marks ]
- (b) Give **three** reasons for establishing a nursery in crop production. [ 3 marks ]
- (c) Mention **three** characteristics of weeds that make them difficult to control. [ 3 marks ]
- (d) List **two** methods of controlling weeds. [ 2 marks ]
- (e) State **three** ways by which diseases are spread among crops. [ 3 marks ]
- (f) Mention **three** effects of diseases on crops. [ 3 marks ]

6. (a) List **four** cereal crops grown in West Africa. [ 2 marks ]  
 (b) State **three** benefits of forests to the economic development of your country. [ 3 marks ]  
 (c) With the aid of a diagram, describe the life cycle of the variegated grasshopper. [ 6 marks ]  
 (d) List **three** cultural methods of controlling crop pests. [ 3 marks ]  
 (e) Give **two** uses of oil palm. [ 2 marks ]

SECTION D

Answer **one** question **only** from this section.

7. (a) Give **three** reasons why fish farming is important. [ 3 marks ]  
 (b) State **three** factors that influence the choice of a suitable site for a fish pond. [ 3 marks ]  
 (c) Mention **two** sources of **each** of the following feed nutrients:  
 (i) water;  
 (ii) proteins;  
 (iii) carbohydrates;  
 (vi) vitamins. [ 8 marks ]  
 (d) Mention **two** ways by which roundworm infestation is of economic importance in livestock production. [ 2 marks ]
8. (a) What is *animal improvement*? [ 2 marks ]  
 (b) Give **three** aims of animal improvement. [ 3 marks ]  
 (c) Define **each** of the following terms as used in animal reproduction:  
 (i) *parturition*;  
 (ii) *gestation period*. [ 4 marks ]  
 (d) Name **three** systems in the body of farm animals. [ 3 marks ]  
 (e) Mention **four** advantages of castration in animal production. [ 4 marks ]

SECTION E

Answer **one** question only from this section.

9. (a) Define the term *balance sheet*. [ 2 marks ]

(b) The financial data of Omega Dairy Farms Ltd. as at December 31<sup>st</sup>, 2012 are shown below:

	N
Cash at bank	200,000.00
Cash in hand	70,000.00
Dairy cattle	5,000,000.00
Milk	300,000.00
Loans	3,000,000.00
Initial capital	4,000,000.00
Interest on loan payable	600,000.00
Account receivable	1,000,000.00
Taxes payable	500,000.00
Milking machine	1,500,000.00
Animal feed	100,000.00

Use the data to prepare a balance sheet for Omega Dairy Farms Ltd. as at December 31<sup>st</sup>, 2012.

[ 11 marks ]

(c) State **two** ways in which the balance sheet is important.

[ 2 marks ]

(d) Is the farm credit-worthy? Give a reason for your answer.

[ 1 mark ]

10. (a) Define the following terms as used in agricultural economics:

(i) *assets*;

(ii) *liabilities*.

[ 4 marks ]

(b) Mention **three** problems encountered by farmers in obtaining agricultural credits.

[ 3 marks ]

(c) Enumerate **four** roles of an agricultural extension agent.

[ 4 marks ]

(d) Outline **five** roles of farmer co-operative societies in agriculture.

[ 5 marks ]