COMPETENCE BASED CURRICULUM
HOMEWORK ENGAGEMENT PROGRAM
GRADE 4 2024 AUGUST
AGRICULTURE AND NUTRITION

LEARNERS INSTRUCTIONS

1. Write your name and assessment number in the spaces provided above
2. Answer all the questions in this paper.
3. All your answers must be written in the spaces provided in the question paper.
4. Learners should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
5. Learners must answer the questions in English

(2 Marks)

1. State two functions of the cut-off drains.

   i) _____

   ii) _____

(4 Marks)

2. State four types of soil erosion

   i._____

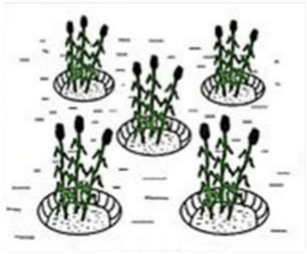
   ii._____

   iii._____

   iv._____

(2 Marks)

3. Name the types of seedbeds shown below

	
a)	b)

(2 Marks)

4. Identify two causes of soil pollution in the agricultural environment.

(3 Marks)

5. State three ways of conserving surface runoff water.

   a. _____

   b. _____

   c. _____

(3 Marks)

6. In one of the Agriculture lessons, the teacher asked learners to search for the meaning of Agroforestry and share their findings with their peers. If the teacher was happy that their definitions were correct.

   a. State clearly what the learners might have said.

   _____

   b. Give two reasons why agroforestry should be practiced in Kenya.

   _____

(3 Marks)

7. A facilitator came to Hekima school during an Agriculture lesson and asked grade 7 learners on the importance of water retention. What answers did they give?

   i._____

   ii._____

   iii._____

(3 Marks)

8. State three farming practices that enhance conservation of water in the soil?

   a.

   _____

   b.

   _____

   c.

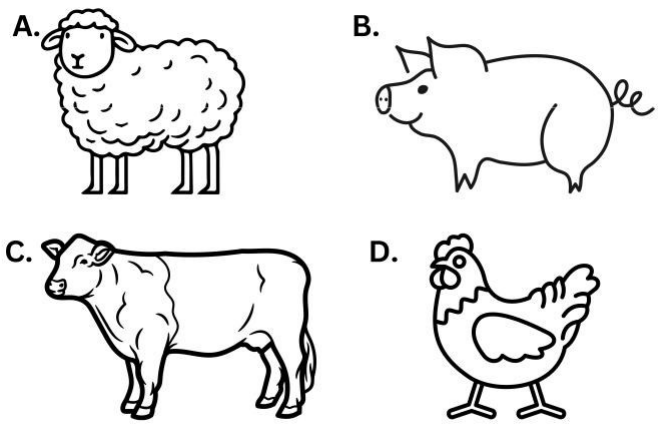
   _____

(1 Marks)

9. Identify one minimum tillage practice.

(2 Marks)

10. Which among the following animals can be sheared?



11. What do you understand by the term surface run – off. (2 Marks)

12. Grade 7 pupils from Gedi junior secondary school visited a nearby farm. They noted the farm had a shallow depression filled with water. The water conservation method is known as (1 Marks)

13. State three ways through which plants protect land against soil erosion? (3 Marks)

a. _____

b. _____

c. _____

(6 Marks)

14. Grade 7 learners were instructed by their Agriculture teacher to carry out minimum tillage oparations on the farm.

a. What is minimum tillage?

_____

b. Name two operations the learners likely carried out

_____

c. Why did the teacher ask them to carry out these operations?

_____

(2 Marks)

15. List two ways of practicing safe soil pollution control measures.

(3 Marks)

16. Name three animals that can be prevented by the use of a safe trap?

a) _____

b) _____

c) _____

17. State two factors to consider when sorting and preparing seeds as planting materials. (2 Marks)

(3 Marks)

18. Grade 7 learners visited a plantation and observed some structures used for conserving surface runoff. Name the three structures they observed.

a. ….....
b. ….....
c. ….....

(1 Marks)

19. The gardening practice from the diagram below is

20. Explain the term agroforestry? (2 Marks)

_____

(2 Marks)

21. What is minimum tillage?

_____

_____

(3 Marks)

22. Discuss three farming practices that pollute soil?

a)_____

b)_____

c) _____

(2 Marks)

23. Anita, a grade 7 student keeps some poultry at home as shown below.

State three routine practices she most likely uses.

i) _____

ii) _____

iii) _____

(6 Marks)

24. Grade 7 learners were asked by their teacher to state and explain the practices carried out during minimum tillage. What answers do you think they gave?

    i._____

    _____

    ii._____

    _____

    iii._____

    _____

25. State the meaning of Agroforestry. (1 Marks)

(2 Marks)

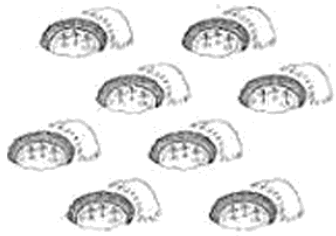
26. State two ways by which innovative lights are used to scare birds.

    a) _____

    b) _____

(1 Marks)

27. Identify the type of seedbed mainly used to conserve moisture.



(2 Marks)

28. During a classroom discussion grade 7 learners were requested to define the term agroforestry. What do you think they gave as an answer?

_____

_____

(2 Marks)

29. Name two common weeds.

a. ….....
b. ….....

(2 Marks)

30. What are the two types of seedbeds that may be used to conserve soil moisture?

i. _____

ii. _____

(2 Marks)

31. List two examples of minimum tillage practices.

a. _____

b. _____

(1 Marks)

32. Define the following term.

Conservation _____

(5 Marks)

33. Name five factors to consider when planning to plant crops.

_____

_____

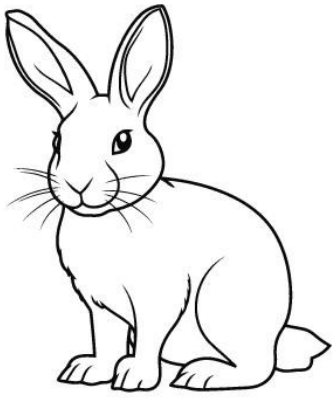
_____

_____

_____

(1 Marks)

34. Identify the domestic animal in the picture below.



(2 Marks)

35. State two activities that increase the rate of soil erosion.

i) _____

ii) _____

(3 Marks)

36. Apart from sunken bed, name three other structures that farmers use to retain water in the farm.

_____

_____

_____

37. A sickle as a farm tool is used for …..... (1 Marks)

(4 Marks)

38. During a discussion, grade 7 learners were asked to discuss ways of conserving water. what answers dis they give?

    i._____

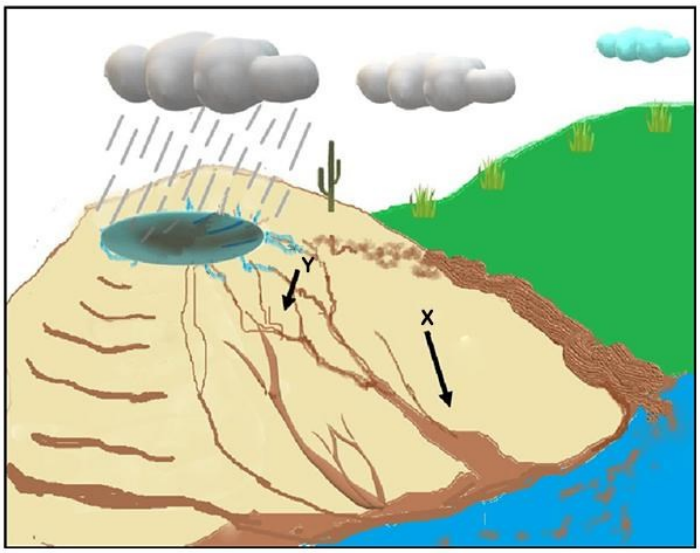
    ii._____

    iii._____

    iv._____

(2 Marks)

39. Name the types of soil erosion marked **X** and **Y** in the diagram below.



(1 Marks)

40. Define the following term.

    Water conservation _____

(2 Marks)

41. The diagram below shows a creeping

    crop. Name two examples of such crops.

(2 Marks)

42. Identify two trees that are suitable for agroforestry.

_____

_____

(3 Marks)

43. Learners conducted research on soil drainage and made various conclusive reports. Write down the type of soil that is suitable for growing the following crops.

a. Arrow roots ….....
b. Rice ….....
c. Coconut ….....

(4 Marks)

44. Identify four minimum tillage practices that farmers should carry out in the farm to reduce conserving water.

_____

_____

_____

_____

45. State three materials that can cause soil pollution

a. _____

b. _____

c. _____ (3 Marks)

46. Discuss the methods through which splash and sheet erosion can be controlled. (2 Marks)

(3 Marks)

47. Grade 7 learners of Hekima Junior Secondary school wanted to plant agroforestry trees in a coffee farm in their school and come to you for advice on the most appropriate tree to be planted.

    a. Name one tree you would advice them to plant.

    _____

    b. State two characteristics of the tree named above that makes it suitable in a coffee farm.

    _____

(1 Marks)

48. Describe one precaution observed during the construction of a water retention pit.

(3 Marks)

49. State three water retention structures

    i._____

    ii._____

    iii._____

(3 Marks)

50. Differentiate between the following terms as used in planting seeds

    i) Broadcasting _____

    ii) Drilling _____

    iii) Dibbling _____

(4 Marks)

51. Pollution involves throwing of harmful materials into the environment. Name 4 ways in which soil is polluted in your environment.

    _____

    _____

    _____

    _____

(2 Marks)

52. Define the following term as used in crop field.

    Earthing up:

    …….....

(2 Marks)

53. Write true or false on the following statements of crop production.

    i) Harrowing involves breaking and smoothening the surface of the soil after digging the land
    _____

    ii) Leveling of the land involves slashing and removal of stumps before digging up the land
    _____

(2 Marks)

54. How does lithium present in batteries affect soil?

    _____

    _____

(5 Marks)

55. Students wanted to practice agroforestry in the school farm. State 5 choices of trees that they should consider to plant.

    _____

    _____

    _____

    _____

    _____

(2 Marks)

56. Name two examples of trees that can be used for agroforestry

    i._____

    ii._____

(1 Marks)

57. Contamination of soil with toxic chemicals or substances that can harm plants, animals, and human beings is known as ….....
    ….....

(5 Marks)

58. During a discussion on crop production, the teacher advised learners on important things that should be done in order to increase the percentage germination of planting materials

    a. State any three planting materials that may be used to establish the crop.

    _____

    b. Give two conditions that may affect percentage germination.

    _____

59. Define the following terms as used in crop field.

Thinning (2 Marks)

….....

….....

(3 Marks)

60. Outline some practices used to control soil pollution.

i)_____

ii)_____

iii)_____

(3 Marks)

61. State three soil pollutants.

a) _____

b) _____

c) _____

(3 Marks)

62. What are the three types of agricultural chemicals that cause soil pollution?

i)

_____

ii)

_____

iii)

_____

(3 Marks)

63. Grade 7 teacher while teaching on animals and their products. Outline three animals that give us manure.

a. ….....
b. ….....
c. ….....

(4 Marks)

64. During a zonal agricultural debate, schools were asked to discuss the various materials used in mulching. What answers did they provide?

i._____

ii._____

iii._____

iv._____

(2 Marks)

65. Identify two agents of soil erosion.

    i) _____

    ii) _____

(3 Marks)

66. Planting sites are very key, especially during seed germination. Identify at least two plants that grow on each line of tilth given.

    i) Fine tilth _____

    ii) Medium tilth _____

    iii) Coarse tilth _____

(2 Marks)

67. List two safety precautions that should be observed while carrying out an experiment demonstrating how soil erosion occurs.

    i) _____

    ii) _____

(3 Marks)

68. A forest extension officer visited Sololo village to advice them on the importances of Agro-Forestry. He also educated them on the advantages of Agro-Forestry. State any three advantages.

    a. ….....
    b. ….....
    c. ….....

(3 Marks)

69. While learning about crop production, students identified different planting sites in school. One method they identified was a container site. Name three places in the school compound the students can place the containers.

    _____

    _____

    _____

70. It has been established that due to ignorance, people in your community have been carrying out activities that have affected the quality of the soil and crop production.

    a. Suggest any three possible harmful activities that must have affected the soil quality.

    _____

    b. Give any two soil pollution awareness creation they may conduct to educate the community

(5 Marks)

(3 Marks)

71. Jemimah, a grade 6 learner, decided to sensitize the community on ways of conserving water in the community. She made a poster. Write three ways of using water sparingly that she wrote on the poster.

    a. _____

    b. _____

    c. _____

(4 Marks)

72. An Agricultural Extension officer visited our school. He toured around the school compound and found a nearby factory polluting the environment. He then asked the learners to state some of the causes of soil pollution. List four causes they stated.

    i)
    _____

    ii)
    _____

    iii)
    _____

    iv)
    _____

73. A grade 7 learner was reading something about surface runoff but didn't understand and decided to ask his peer who gave him correct definition. How was this word defined? (2 Marks)

(3 Marks)

74. While establishing crops in a school farm, the students brought vegetative planting matereals. Name three examples of plants that the students brought to the school.

    _____

    _____

    _____

(1 Marks)

75. A grade 7 agriculture teacher asked the learners to define soil pollution. What answer did they give?

    _____

    _____

76. State four ways in which Agroforestry conserve the environment.

_____ (4 Marks)

_____

_____

_____

77. Explain how deflectors prevent rodents from entering a grain store. (2 Marks)

(2 Marks)

78. State two importance of agro-forestry.

a. _____

b. _____

(Confidential)

Marking Scheme

(2 Marks)

1. i) They hold water
   ii) They lead water away from farming land
   iii) Prevent water from flowing into the farm
   iv) Prevent soil erosion

(4 Marks)

2. i. Splash erosion
   ii. Sheet erosion
   iii. Rill erosion
   iv. Gulley erosion

(2 Marks)

3. a) Sunken seedbed/sunken bed.
   b) Shallow pit

(2 Marks)

4. i) Oil spillage
   ii) Poor disposal of plastic bags
   iii) Excessive use of fertilizers etc

(3 Marks)

5. a. Water retention ditches
   b. Water retention pits
   c. Earth basins

(3 Marks)

6. a. Agroforestry is the planting of trees on the same piece of land where crops are grown and animals are kept.
   b. Reasons for practicing agroforestry in Kenya
   i. It conserves soil moisture
   ii. It reduces soil erosion
   iii. Agroforestry trees improve soil fertility
   iv. They reduce the speed of surface run-off

(3 Marks)

7. i.Ensures continuous supply of water
   ii.Helps in maintaining hydrological balance
   iii.Helps in retaining water for longer periods after the rains

8. a. Mulching
   b. Minimum tillage
   c. Cover cropping
   d. Agroforestry

e. Shallow pits
f. Sunken beds

(3 Marks)

9. i) Slashing
ii) Uprooting
iii) Mulching

(1 Marks)

10. A

(2 Marks)

11. Water on the ground after heavy rainfall (2 Marks)

12. Earth basin (1 Marks)

13. a. The roots of plants hold soil particles firmly preventing them from being carried.
b. The leaves of plants traps raindrops reducing impact on the ground.
c. Plants growing on slopes slows down water.

(3 Marks)

14. a. Minimum tillage refers to a reduced number of farming operations carried out on the farm to conserve soil moisture
b. Accept any of the following operations
i. Operations
ii. Mulching
iii. Planting cover crops
iv. Agroforestry
v. Slashing
vi. Restricted cultivation
c. This was intended to conserve soil water

(6 Marks)

15. i) Minimal use of fertilizers
ii) Proper disposal of plastic bags

(2 Marks)

16. a) Birds
b) Mice
c) Beavers
d) Hares
e) Rats

(3 Marks)

17. Size, health, free from diseases and pests (2 Marks)

18. a. Water retention pit.
b. Earth basin.
c. Water retention ditches.

(3 Marks)

19. Mulching

(1 Marks)

20. Agroforestry refers to the practice of growing crops and trees in the same land. (2 Marks)

(2 Marks)

21. This refers to various farming operations which are carried out on a farm with least disturbance to the soil.

(3 Marks)

22. a) Use of wrong artificial fertilisers/ chemicals
    b) Use of wrong amount of artificial fertilisers/ chemicals
    c) Inorganic farming
    d) Dumping plastic wastes
    e) Dumping used chemical containers
    f) Excessive use of chemicals

(2 Marks)

23. i) Feeding.
    ii) Watering.
    iii) Clearing tools and equipment.
    iv) Maintaining an appropriate number.
    v) Parasite control.
    vi) Veterinary care.

(6 Marks)

24. i. Mulching – helps to prevent water loss from the soil by not exposing it to direct sunlight.
    ii. Uprooting of weeds – helps in ensuring minimum disturbance to the soil.
    iii. Slashing weeds – weeds compete for water with crops from the soil.
    iv. Slashing the weeds will prevent water loss through transpiration.

25. This is the practice of growing crops together with trees. (1 Marks)

(2 Marks)

26. a) Hanging reflective materials
    b) Hanging torches
    c) Using solar light

(1 Marks)

27. Shallow pits

(2 Marks)

28. It is the deliberate growing of crops, trees and animals on the same piece of land.

(2 Marks)

29. a. Oxalis
    b. Blackjack

(2 Marks)

30. i. Sunken beds
    ii. Shallow pits

(2 Marks)

31. a. Slashing weeds
    b. Mulching
    c. Uprooting weeds
    d. Use of herbicides
    e. Restricted cultivation

(1 Marks)

32. Maintaining or protecting something so that it is not wasted or lost.

(5 Marks)

33. i) Soil moisture
    ii) Onset of rain
    iii) Staggered planting
    iv) Time of harvesting

(1 Marks)

34. Rabbit

(2 Marks)

35. i) Animal activities
    ii) Human activities
    iii) Types of soil
    iv) Rainfall
    v) Slopes

(3 Marks)

36. i) Earth basin
    ii) Water retention ditches
    iii) Water retention pits

37. Harvesting rice/ wheat. (1 Marks)

(4 Marks)

38. i) Harvesting
    ii) Recycling
    iii) Re using
    iv)Storing water in dams

(2 Marks)

39. X - Gulley
    Y - Rill

(1 Marks)

40. Refers to maintaining water as a natural resource and ensuring it is not lost or wasted to be used for future use.

41. i) Water melons.
    ii) Pumpkins.
    iii) Strawberries.

iv) Cucumber.
v) Calabash. (2 Marks)

(2 Marks)

42. i) Casuarina
ii) Grevilea

(3 Marks)

43. a. Clay soil.
b. Clay soil.
c. Sandy soil.

(4 Marks)

44. i) Mulching
ii) Slashing weeds
iii) Uprooting weeds
iv) Restricted cultivation

(3 Marks)

45. a. Excess artificial fertilizers
b. Excess agricultural chemicals
c. Plastic containers/ waste
d. Chemical containers

46. Cover cropping - reduce the impact of rain drops and speed of water. (2 Marks)

(3 Marks)

47. a. Grevilloe
b. The leaves and branches do not interfere with the passage of sunlight and rainfall
i. Leaves can be shed. This increases soil fertility.
ii. Their roots cannot interfere with those of the coffee plant.

(1 Marks)

48. i) A fence should be constructed around the retention pit
ii) Should not be extremely deep.

(3 Marks)

49. i.Earth basins
ii.Water retention ditches
iii.Water retention pits

(3 Marks)

50. i) Broadcasting seeds are sprinkled and thrown in random in the land.
ii) Drilling seeds are planted in farrows.
iii) Dibbling seeds are placed in holes in cultivated land and then covered.

51. i) Dumping plastic on the soil.
ii) Excessive use of farm chemicals.
iii) Improper disposal of used chemical containers.

iv) Excessive use of artificial fertilizers. (4 Marks)
v) Soil erosion.

(2 Marks)

52. Earthing up – Heaping soil around the base of a crop.

(2 Marks)

53. i) True
ii) False

(2 Marks)

54. It causes leaching of the soil

(5 Marks)

55. i) Deep rooted
ii) Fast growing
iii) Free from chemicals
iv) Small leaves
v) Should be beneficial

(2 Marks)

56. i.Casuriana
ii.Grevillea

(1 Marks)

57. Soil pollution.

(5 Marks)

58. a. i. Small seeds
ii. Medium seeds
iii. Large planting
materials b. i. Soil moisture
ii. Condition of the seeds
iii. Visibility Accept any two

(2 Marks)

59. Thinning – Removing excess seedlings.

(3 Marks)

60. i)Safe disposal of plastic wastes
ii)Using the correct types and amounts of fertilizer
iii)Farmers to be encouraged to practice crop rotation to protect soil fertility iv)Waste materials can be recycled to reduce disposal
v)Minimizing the use of pesticides and herbicides on the farm

(3 Marks)

61. a) Wrongly disposed of plastic wastes
b) Excessive agricultural chemicals
c) Wrongly disposed chemical containers

(3 Marks)

62. i) Herbicides .
    ii) Fertilisers.
    iii) Fungicides

(3 Marks)

63. a. Cattle
    b. Goats
    c. Sheep/ poultry

(4 Marks)

64. i. Dry sticks
    ii. Polythene bags
    iii. Leaves and grass

(2 Marks)

65. i) Water
    ii) Wind
    iii) Moving

(3 Marks)

66. i) Millet and sunflower seeds
    ii) Beans and maize seeds
    iii) Tubers, suckers and cuttings

(2 Marks)

67. i) Clean your working space
    ii) Dispose off the soil appropriately
    iii) Take care not to splash water or mud to your classmates

(3 Marks)

68. a. Make land more resilient against erosion.
    b. Saves land and make it more productive.
    c. Provides manure as leaves fall.

(3 Marks)

69. i) Along the fence
    ii) On the building walls

70. This question is testing the learners understanding of the causes of soil pollution. Therefore any activity that interfere with soil quality and productivity should be accepted
    a. i. Excessive use of farm chemicals.
    ii. Improper disposal of domestic
    waste. iii. Overgrazing
    iv. Monocropping
    v. Ploughing of land along the slope vi.
    Clearing land by burning vegetation
    vii. Spilling oil on the farm
    b. Dramatization

i. Use of poems (5 Marks)
ii. Use of songs

(3 Marks)

71. a. Using water saving shower.
b. Using a watering can to water crops in the farm.
c. Turning off water taps when not in use.
d. Repairing leaking water pipes or taps

(4 Marks)

72. i) Excessive use of agricultural chemicals.
Ii) Poor irrigation methods.
Iii) Excessive use of agricultural fertilizers.
iv) Improper dumping of plastic wastes and materials.

73. Surface run-off refers to the water that flows on the surface of the earth after heavy rainfall. (2 Marks)

(3 Marks)

74. Sweet potatoes, sugarcane, cassava, banana

(1 Marks)

75. Refers to introduction of harmful materials to the soil which intern causes contamination and degrades the soil quality.

(4 Marks)

76. i) Supply wood for fuel
ii) Trees conserve soil
iii) Trees act as windbreakers
iv) Trees absorb carbon dioxide from the atmosphere

77. Deflectors are smooth and shiny. When light shines on them they reflects it. The reflected light scares rodents away. (2 Marks)

(2 Marks)

78. a. Prevent soil erosion
b. Improves water conservation in the soil
c. Reduces water runoff
d. Acts as wind breakers
e. Provides shade to people and animals