



***Confidential***

***MARK SCHEME***

***{5920/02}***

***MARKS: 100***

This document consists of 4 printed pages.

**SECTION A**

- 1 (a) cool; dry place; away from sunlight; aerated place. [2]  
 (b) in shorter days, hens have less time to eat; food is necessary for egg production; light also stimulate the production of hormones which produce eggs; longer day length more hormones are produced. [2]
- 2 (a)  $1.8 - 0.28 / 1.81 - 0.28$  correct reading of graph [1]  
 $= 1.52\text{kg} / 1.53 \text{ kg}$  correct calculation [1]  
 (b) first two weeks starter; three to four weeks grower; five to six weeks finisher. [3]
- 3 (a) profitability; productivity; breeding; health. [2]  
 (b) it is the increase of the amount of feed before mating; to improve ovulation and embryonic survival. [2]  
 (c) to kill worm eggs; to kill germs. [2]
- 4 (a) udder firm not hang down; normal teats; health goats with bright eyes and alert, shiny coat and clean; avoid goats with horns; check records; strong legs and good feet [3]  
 (b) goat lays down; water bag comes out of vulva; mucous discharge; front legs first; head in between. [2]
- 5 (a) easily moved; require a small space; economical in seed usage; easy management; minimum damage during transplanting; improve crop uniformity; predict the harvest date more accurately; improve the survival rate of seedlings at nursery; extend the growing season. [2]  
 (b) drip irrigation-water applied within the crop row; space between crops kept dry; weeds do not grow on dry area. [2]
- 6 (a) CMR beetle [1]  
 (b) feeds on the flower; hinders pod formation; reduced yields; [3]
- 7 (a) to ensure that trees are exactly the same; to ensure similar fruits; to ensure similar yields; to ensure disease resistance; takes a short time to bear fruits; allow 'trees a uniform size; controls tree size;' to increase 'stock of named cultivars. [2]  
 (b) A budding [2]  
 B grafting [2]
- 8 (a) (i) basin [1]  
 (ii) high leaching looses; fungal disease incidence is very high; wastage of water [2]  
 (b) Crop roots bind soil together; crop canopy intercept rain drops; speed of runoff water is reduced; reduce pest and disease; increase biodiversity/pollinators. [3]
- 9 (a) minimal use of pesticides/ minimal use of herbicides; use of organic fertiliser; integrated pest control strategy; proper calibration of fertiliser spreaders and pesticide sprayers; proper waste disposal on farm. [3]  
 (b) job opportunities; economic growth; prevents soil erosion; water conservation; reduce global warming; habitat for animals. [3]

- 10 (a) bougainvillea's; palms; roses; lillies; sheenas gold [2]  
 (b) reduces the accessibility of insects and animals; reduces exposure to extreme weather conditions (any one) [2]
- 11 (a) water source; good air drainage; wind break; fenced area; accessibility; melliferous plants; proximity to farm. [3]  
 (b) pesticides; irrigated crops; climatic conditions; competitive plants. [2]
- 12 (a) bottle the honey; label the honey bottles; store in clean dry place; at room temperature; airtight container [3]  
 (b) melt wax; clean and filter; capping. [3]

### SECTION B

- 13 (a) Good health to produce healthy piglets; long body for more space for teats; uniform from front to rear for more meat; well- spaced feet and legs for proper teats development; market acceptability for more sales; should have less than 16 back fat thickness; reproductive efficiency litter size/ litter weight (any five) [5]
- (b) Scrap and thoroughly clean to remove dirt or dung on floor; rinse with hot water to kill worm eggs; disinfect; provide clean bedding; provide enclosure to prevent wind; clean container; test nipples; provide heat source; provide farrowing crate. (any five) [5]
- (c) Leave boars entire as they grow lean meat faster; avoid overcrowding pigs will struggle and fight for feed reducing growth rate and weight gain; deworm to kill roundworms that competes for food and slows growth; clean the pen regularly to prevent the spread of diseases; provide proper feed for the piglets to promote growth. weigh the piglets regularly to monitor growth rate; isolate sick pigs to prevent spread of diseases. (5 marks for listing points without explanation; 10 marks for five with explanation) [10]
- 14 (a) Suitability of the climatic condition; performance or yield of the cultivar; pest and disease tolerance; length of planting to maturity; adaptation to local condition; quality of the product. (any five) [5]
- (b) Is the planting of different crop types on one piece of land each planting season/ planting of different crops in one field in a sequence. [1 mark for description]

Year	1	2	3	4
A	Cereal	legume	Cash crop	grass
B	Legume	Cash crop	grass	cereal
C	Cash crop	Grass	cereal	legume
D	grass	cereal	legume	Cash crop

[ 4 marks for example]

[5]

- (c) (i)** Weeds must be removed to avoid competition of light/nutrients/water/space; weeding minimises pests and diseases they do not act as hosts for pests and diseases; weeding promotes airflow between plants to promote growth/reduce fungal or plant diseases; weeding reduces costs of using a lot of fertilisers; weeding keeps the garden clean to make it easy to carry out other management activities such as fertilizing; weeding prevents contamination of maize crop by weed seeds, thereby ensuring maximum saleable price; weeding can prevent weeds interfering and clogging harvester / combine operations at harvest time thereby reducing costs of harvesting. [5]
- (ii)** Fertilising increases plant growth; promotes healthy growth; enhances plant resistance to pests and diseases; improves crop yield; improves crop quality at harvest; restoring soil fertility and productivity. [5]
- 15 (a)** In formal gardens borders, beds and other features are in a geometrical pattern while informal gardens features are not arranged in a geometrical pattern; in formal gardens paths/beds and borders are arranged in straight lines, informal gardens arrangement is not in a straight line; in formal gardens plants flower at the same time while in informal gardens plants flower at different times; in formal gardens plants grow to the same height, informal garden plants grow at different heights; boundaries between areas of different plants are sharp and distinct informal gardens boundaries are irregular; in formal gardens hedge is cut into a geometric shape hedge is fluffy in informal gardens. It is costly to maintain formal gardens while it is cheaper to maintain informal gardens. [5]
- (b)** select appropriate pot for the size of the plant to allow roots to spread evenly in the soil; add compost as the base for planting to add nutrients in the soil; add fine sand for ease of drainage and aeration; mix compost and sand for even distribution in the pot; plant the seedling and press around the plant to prevent lodging; water the seedlings to prevent wilting and to enhance absorption of nutrients. [5]
- (c)** clear the land by removing stones and tree stumps to avoid injuries during use; level the site using a mechanical grader/ wooden plank with a spirit level to avoid bumpy surface which can affect players; drain the site in case of clay soil to avoid swampy areas in the field; cultivate the soil deeply to a depth of at least 20cm for deep penetration of roots; work the soil to a fine tilth using a rake for ease of germination; firm the soil by walking over the soil; fallow the site to get rid of dormant weeds; apply fertiliser to the soil to add nutrients; do final levelling of the soil. [10]