

AGRICULTURE

FORM 4

MARKING SCHEME

1. - Many chicks can be hatched at a time.
 - It is possible to plan when to hatch chicks.
 - The incubator is usually ready when required
 - If management is good, chicks have no danger of suffering from parasites or diseases.($\frac{1}{2} \times 4$)

2. - To provide different forward speed.
 - Allow the driver to select forward or reverse movement of the tractor.
 - Allow the driver to stop the tractor without suddenly stopping the engine or without keeping his foot pressed on the clutch.
 - Allow the driver to change the speed ratio of the tractor($\frac{1}{2} \times 2$)

3. - Plough
 - Small size/light harrow
 - Ridgers
 - Rotary tillers
 - Mowers
 - Planters
 - Seeders
 - Cultivators/weeders
 - Sprayers
 - Shellers($\frac{1}{2} \times 4$)

4. - Suckling the calf before milking
 - Washing the udder with worm water
 - Feeding the cow during milking
 - Familiar noises such as whistling($\frac{1}{2} \times 4$)

5. - It is economical for farmers with enough zero grazing animals
 - Liquid by-product of fermentation process is a better quality fertilizer
 - Potentially harmful wastes of cow and pigs are removed from zero grazing enclosure.($\frac{1}{2} \times 2$)

6. I)- goats

- saanen
- Toggenburg
- British alpine poultry
 - leghorns
 - ancona
 - minorca
 - sykes

7. Land sub-division is the partitioning of land into small portions located in one area while land fragmentation is where single farmer owns several parcels of land scattered over a wide area.

8.

Disc Plough	Mouldboard Plough
Suitable on field with stones, Roots and stumps.	Cannot be used on fields with stone, roots or stumps.
Does not invert the furrow slices Completely.	Inverts the furrow slices completely.
More secondary operations are necessary after it has been used.	Fewer secondary operations are needed.
Cuts at varying points.	Operates at uniform depth.
Not easily broken by obstacles.	Can easily be broken by obstacles.
Requires less power to pull when	Requires more power to operate.

(Each correctly marked difference for 1 mark)

9. - Body size or weight of the animal
- Age of the animal
 - Animal's activities
 - Level of production
- ($\frac{1}{2} \times 4$)

10. - mechanical method
- Heat treatment
 - Chemical treatment
 - Soaking in water
- ($\frac{1}{2} \times 4$)

11. - Size of the air space(cell)
- Blood sport on the yolk

- Hair cracks on the shell
 - Broken egg shell
 - Porous shell
- ($\frac{1}{2}$ x 4)

12. - Should not suffer from any contagious diseases.
- Physically clean
 - Wear clean white overall when milking and handling milk.
 - Should keep fingernail short
 - Should cover the hair during milking and handling milk
- ($\frac{1}{2}$ x 4)

13. - It is free from disease-causing organisms.
- It has no hair dirt or dust
 - It is of high keeping quality
 - Has good flavor
 - Its chemical composition is within the expected standards
- ($\frac{1}{2}$ x 4)

14. - temperature (37.5-39.4)
- Fresh air(oxygen)
 - Relative humidity
 - Egg turning
- ($\frac{1}{2}$ x 4)

15. - mastitis
- Foot rot
 - Contagious abortion
 - Scours
 - Black quarter
 - Anthrax
 - Pneumonia
- ($\frac{1}{2}$ x 4)

16. -Tools should always be left in a safe place
- Use the correct tool for the correct job
 - Tool should be maintained and served to remain in good working condition and last longer.
 - Tool should be handle correctly when in use to avoid damage to th tool and injury to the user.

-Use of safety devices to reduce accidents

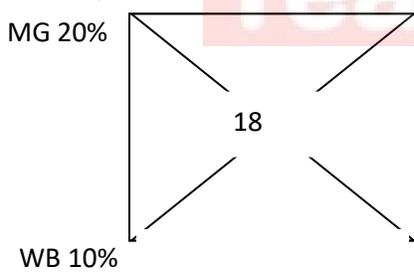
SECTION B

17. a) A- egg shell
 B-chalazae
 C-albumen
 D-yolk
 b) No hair crack
 It should be porous
 Should not be broken
 c) Supply food for the developing chick

18. (a). ox – plough
 (b). A- Mould board
 B – Share
 C – Main beam
 D – Land – wheel
 E –Land – side

- (c). Function of.
 C – Attachment of all parts.
 -Adds weight for deeper ploughing`
 E – Stabilizes plough against thrust by furrow slices

19. a)



MG 20%

WB 10%

18

8 parts of MG

parts of WB

2/10 total part

Calculating for

$$MG = \frac{8}{10} \times 100 = 80\text{kg}$$

$$WB = \frac{2}{10} \times 100 = 20\text{kg}$$

$\frac{2}{10}$ parts of WB

Total parts

b) Trial and error

20.

- G –induction stroke
 H –compression stroke
 I –power stroke
 J –exhaust stroke

- (b) Are expensive to buy and maintain (2mrks)

Their use is limited in areas
They require skilled personal and support services

SECTION C

21. a)

- Short-term planning
- Long-term planning
- Information gathering
- Comparing the standards of one's enterprises with the set standards
- Detecting weaknesses and constraints and finding ways and means to overcome them
- Keeping farm records up-to-date and using them in the day-to-day running of the farm.
- Implementing farm decisions and taking responsibility.

b)

- land
- labour
- capital
- management

c)

Petrol engine	Diesel Engine
It has a carburetor	It has an injection pump.
Fuel and air are mixed in the carburetor before it gets into the engine.	The fuel and air are mixed within the Cylinder.
Fuel is ignited by an electric spark.	Fuel is ignited by compression of air and Fuel mixture in the cylinder.
It produces little smoke because Petrol is completely burnt.	It produces a lot of smoke since the diesel Is not completely burnt.
Petrol engine is light in weight and Suited for light duties.	It is relatively heavy in weight and suited For heavy duties.

22.

a)

- Presents of broken eggs
- Bright light in the nests
- Idleness
- Inadequate nets forcing birds to lay eggs on the floor
- Lack of minerals such as calcium in the diet making look for mineral from the eggs

b)

- Any sudden change such as change if feed

Presents of Strangers and predators
 Handling of birds during management
 Sudden noise such as thunder
 Sudden change of weather
 Disease and parasite infection
 Lack of food and water

c)

High egg production due to less energy wasted by the birds
 Accurate egg records can be kept because it is easy to know which bird has laid
 Cannibalism and egg eating are controlled
 The system can easily be mechanized
 Birds do not contaminate food and water
 Eggs are clean because the hen do not step on them
 Handling is easy as hen are restricted in a small place
 Broodiness is discouraged as the birds do not reach the eggs
 Large number of birds can be kept in small space hence higher stocking rate
 Sick birds can be detected readily and isolated for treatment
 Wire floors prevent re-infestation of parasitic worms and coccidian
 there is no bullying during feeding
 there is low labour requirement

22.

a)

milk quickly and evenly
 milk at regular times
 avoid use of wet hand
 complete milking

b)

udder cloths/towels
 filtering pads
 milking jelly
 warm water
 milking pails/buckets
 strip cup
 milking churn/cans

c)

- Use of prophylactic drugs – Animals are given drug routinely to control certain diseases e.g. chicken are given.
- Use of antiseptic and disinfectants: They contain germicidal chemicals e.g. elecauning poultry or calf pen with disinfectant help control certain diseases/maintain hygiene's.
- Qualantino – during an outbreak of certain notifiable disease like foot and mouth disease.
 Livestock movement is restricted to avoid spread of diseases.

- Isolation – Animals suffering from certain dangerous disease e.g. scours and brucellosis are isolated to prevent the spread of the disease to the healthy ones.
- Mass slaughter/culling: Animals suffering from certain dangerous diseases e.g. zoonotic disease like anthrax should be slaughtered in mass to eliminate the disease.
- Vaccination: Animals are usually vaccinated against certain diseases e.g. lumpy skin disease/black quarter.
- Control of vectors – Diseases carrying parasites e.g. Tsetse fly are controlled by spraying with appropriate chemicals or bush clearing to control diseases like nagana.
- Use of healthy breeding stock/AI healthy breeding stock or use AI help to prevent breeding diseases like brucellosis.
- Proper nutrition – well nourished animals are healthy and do not suffer from nutritional diseases like anaemia in piglets.
- Drenching/control of internal parasite. Internal parasites may cause diseases.
- Keeping resistant breeds of livestock. By keeping Zebu cattle occurrence E.C.F is reduced.
- Proper housing – this prevent diseases like pneumonia.
- Foot trimming – to minimize occurrence of foot rot.

