**30.14.2 Agriculture Paper 2 (443/2)**

1.

* Ambient temperature/humidity.
* Level of production/amount of work done by the livestock.
* Species of the livestock/breed/type of animal.
* Weight/size/age of livestock.
* Physiological status, for example:- health and pregnancy.
* Type of feed taken by the livestock. ***(4 x ½ =2 marks)***

2.

* Active ingredients of acaricide/ability to kill ticks.
* Persistence of the acaricide/stability of the acaricide/ability to remain effective after fouling with hair, mud, dung and dirt.
* Concentration of the acaricide in the mixture/dilution.
* Weather condition during application.
* Thoroughness/skill of application/method of application ***(3 x ½=1½ marks)***

3. Angora goat. ***(½ mark)***

4. ***Homogenization*** is the mechanical breakdown of large fat globules in milk into smaller fat particles which are then evenly distributed in milk, while ***Pasteurization*** is the heating of milk to a certain temperature followed by chilling in order to kill harmful bacteria that spoil the milk. ***(1x1=1 mark)***

5.

* Wire strainer.
* Monkey strainer. ***(1x ½ =½ mark)***

6.

* Driving wedges in when splitting wood.
* Braking/crushing big stones/Demolishing farm structures. ***(1 x ½=½ mark)***

7. The application of antibiotics into the teat canals of the cow’s udder after drying off the cow to prevent mastitis/bacteria infection. ***(1 x 1=1 mark)***

8. Increased vigour and performance as a result of crossing two unrelated breed.

 ***(1 x 1=1 mark)***

9.

* Age of the equipment.
* Wear and tear/use.
* Lack of maintenance practice.
* Exposure to weather/improper storage.
* Wrong use of the equipment.
* Obsolescence/change in technology. ***(4 x ½=2 marks)***

10. For the attachment of trailed implement. ***(1 x ½=½ mark)***

11.

* The oil bath air cleaner/wet air cleaner.
* The dry type air cleaner. ***(2 x ½=1 mark)***

12.

* To prevent the germinal disc from sticking on the egg shell which may lead to death of the embryo.
* To make sure warmth is distributed evenly around the egg for uniform embryotonic development. ***(1 x ½ = ½ mark)***

13. Caecum. ***(1 x ½= ½ mark)***

14.

* Reinforcing with concrete.
* Cutting the top of posts at a slope.
* Covering the top of posts with metal plate.
* Charring/sling burning of posts.
* Applying wood preservatives scopper sulphate, cresole, pentach.
* Painting.
* Apply old engipe oil.
* Seasoning/propen diedrin/sodium dicronate drying tarnex. ***(2 marks)***

15.

* Spray race.
* Footbath.
* Housing/shed.
* Fences.
* Crush.
* Plunge dip. ***(4 x ½=2 marks)***

16. ***Mothering ability*** refers to that ability of the dam (mother) to take care of the offspring until weaning whereas ***Prolificacy*** is the ability of the female animal to give birth to many offspring at the same time, for example:- a litter.  ***(1 x 1=1 mark)***

17.

* Zygote implanation is facilitated.
* Facilities production of more ova.
* Increases conception rate.
* Increases lambing percentage/encourages multiple births in ewes. ***(1 mark)***

18.

* It is used for cooking.
* Facilitates production of more ova.
* Increase conception rate.
* Increase lambing percentage/encourages multiple births in ewes. ***(3 × ½ =1 ½ marks)***

19. Birna virus/virus. ***(½ mark)***

20. (a) By restricting animal movements and their products from and into the affected areas in the event of an outbreak of a notifiable disease thus preventing the spread of the disease. ***(1 x 1=1 mark)***

(b) By preventing the occurrence of the disease using preventive drugs. ***(1 mark)***

21

* To avoid deficiency diseases.
* Make the animal robust/strong enough to be able to resist disease attack.

 ***(2 x ½=1 mark)***

22.

* Age of animal:- older animals are more prone.
* Stage of lactation period:- more prone at the beginning and also at the end.
* Udder attachment/large penclulous udders are more prone.
* Incomplete milking.
* Mechanical injury on the teats.
* Poor sanitation.
* Poor milking technique. ***(4x½=2 marks)***

23.

* Cause irritation.
* Damage the wool (due to scratching/lower quality of wool.
* Cause retarded growth.
* Cause anaemia.
* Bites and injuring the skin/create wounds. ***(2x 1 = 2 marks)***

24. (a) Landrace. ***(1 mark)***

 (b) Hereford. ***(1 mark)***

25. (a) ***B1***:- Milk secretory cells/alveoli cells/lactiferous alveoli.

 ***B2***:- Milk duct/mammary duct/lactiferous duct.

 ***B3***:- Gland cistern/milk/lactiferous sinus. ***(3 marks)***

(b)

* For milk secretion.
* For milk synthesis. ***(1 mark)***

(c) The lining of teat cistern/sinus/Teat canal. ***(1 mark)***

26. (a)

 ***(2 marks)***

(b) (i) ***E***:- Cannula

 ***F:***- Trocar ***(1 mark)***

 (ii) Used to relieve bloat in animals/accumulation of gases in rumen.***(1×½= ½mark)***

 (iii)

* Both equipment are inserted at the apex of the enlarged area, on the left side of the animal/plate/sublumbar renion.
* The trocar is then withdrawn while holding the cannula until the bulk of the gas escapes.
	+ - Remove the cannula there after. ***(2 marks)***

27. (a) ***G***:- Fan.

 ***H***:- Fin/Radiator Fins.

 ***J***:- Head tank.

 ***K***:- Thermostat. ***(2 marks)***

 (b)

* ***G (Fan)***:- used for blowing cool air current through the fins to assist in cooling hot water coming from the engine block as it moves to the head tank for further circulation.
* ***J (Head tank)***:- Holding/storing water for the cooling system.
* ***K (Thermostat)***:- used for regulation of the temperature of water in the engine.

28. (a)

* ***Stage 1***:- The eggs on the ground hatch into larvae which emerge and climb onto the host and feed on blood.
* ***Stage 2***:- The engorged larvae moult into nymphs which emerge and feed on blood.
* ***Stage 3***:- The engorged nymphs moult into adult which emerge and feed on blood of host.
* ***Stage 4***:- The engorged adults mate and the female drops to the ground. ***(4 marks)***

 (b) A one-host tick. ***(½ mark)***

29. (a)

* Claw hammer: - For driving nails into the wood during construction and removing of nails from wood.
	+ - Tinship:- For cutting sheet metal.
		- Pliers:- For cutting wire.
		- Mallet:- For hitting the chisel when cutting grooves in wood.
		- Wood chisel:- For cutting grooves in wood or beveling.
		- Jack plane:- For smoothening wood.
		- Tape measure/rule:- For measuring lengths of materials to be used.
		- Marking gauge:- Marking line on wood.
		- Spirit level :- Determine the vertical/horizontal straightness.
		- Hand saw/rip saw:- For cutting wood into pieces required.
		- Clamp:- For holding pieces of wood together when cutting or joining wood.
		- Screw driver:- For driving screws in wood or removing screws from wood.
		- Scriber:- For marking lines or metal sheets.
		- Try square:- To measure or determine the right angles. ***(10 marks)***

(b)

* Cost of the materials to be used.
* Availability of required skills/labour.
* Availability of capital for the kind of material
* Availability of materials required.
* Environmental conditions such as presence of pests, soil type climate.
* Durability/quality/strength of material.
* Type of the dairy shed-whether temporary or permanent.
* Toxicity of the materials to do the work in question.
* Toxicity of the materials to the animal, for example:- use of non-toxic painting materials like the white wash.
* Workability/applicability of the material.
* Farmers tastes and preferences. ***(10 marks)***

30 (a)

* Ensure the calf suckles the cow within the first 8 hours to get colostrums.
* Feed the calf on colostrums for the first four days.
* Feed the calf 2-3 times per day for the first 4 weeks.
* Introduce the feeding of whole milk/milk substitutes after the 4th day.
* Feed the calf on correct amount of milk up to weaning.
* Feed the calf with warm milk to avoid calf scours/milk should be fed at appropriate temperature and at regular intervals.
* Provide adequate clean water to the calf from the 3rd week.
* Introduce palatable dry feeds such as concentrates/calf pellets/calf pencils and good quality cut grass for the 3rd week.
* Any change in feeding should be done gradually to avoid nutritional disorders.
* Clean equipment should be used for feeding calf.
* Calf should be trained to suck the milk from the bucket/bucket feed. ***(10 marks)***

 (b)

* Milking equipment should be clean.
* Clean milking parlour/shed.
* The udder should be cleaned before milking.
* The milkman should be clean and healthy.
* The cows should be tested for mastitis before milking.
* Cows with mastitis should be milked last and milk disposed of.
* The milk should be sieved/filtered after milking.
* The milk should be stored in a cool dry place/proper storage.
* Cow should be healthy/check the cows regularly for milk-borne disease.
* The milk should be covered after milking.
* Feeds that can taint milk should be avoided/equipment that can taint milk should be avoided.
* Milk should be cooled immediately to reduce bacterial multiplication
* Chip hair around udder and flank. ***(10 marks)***

31 (a) (i)

* Is used to attach the trailed or mounted implements on a tractor.
* Lower links are hitched to the lower links of the implement.
* The adjustable top link is attached to the top link of the implement.
* The top link lifts the implement through the hydraulic power system when in operation or during transportation.
* The lower links hold the implement in place to provide stability.
* The check prevent the implement from getting into the tractor tyres when the tractor is moving. ***(6 marks)***

(ii)

* PTO is used to transmit power to operate various mounted and stationary implements/the short splined shaft/the tub shaft of the PTO at the rear of the tractor transmits power from the tractor to the implement.
* The extension shaft has a universal joints at both ends which are used of adjusting the distance between the tractor and the implement.
* The short splined shaft at the rear of the tractor is also used for attaching/coupling to the implement. ***(4 marks)***

 (b)

* In this system the battery or generator supplies sparks which are required for ignition to take place.
* The ignition coil changes the low voltage from the battery to a high voltage current required in the spark plug in petrol engine.
* The condenser absorbs self induced current in the primary circuit hence preventing the contact breaker points from excessive pitting.
* It stores electric for a short time.
* The condenser passes on the electric current to the distributor which distributes the high voltage current to the spartk plugs.
* This causes the spark to occur at each cylinder in the required firing order.
* The contact breakers’ function is to interrupt the normal flow of current in the primary circuit.
* An electric spart from the plug then ignites the air-fuel mixture in the cylinder, then the tractor engine starts. ***(10 marks)***