**AGRICULTURE**

**PAPER 2**

* **MARKING SCHEME**

1.(a) Notifiable disease is a highly contagious and infectious diseases whose out break must be reported in police / livestock authority. (1 mk)

* (b) - Rinder pest
  + Foot and mouth disease
  + Newcastle
  + African swine flu
  + Gumboro
  + Fowl pox (2x ½=lmk)

2.- double yolk

* + meat spot
  + hair cracks
  + broken egg shell
  + very porous egg shell
  + very small size of air space (4x½= 2 mks)

3.-To make them efficient

* -To make the last long
* -To avoid injury
  + To avoid damage (2 x ½ = 1 mk)

4(a) - Absorb moisture

* + keep the floor warm (2 x ½=lmk)

(b) - To disinfect the feet of the farmer (½mk)

5.- possible to implant embryo from a high quality female to less quality female hence improving performance of off springs.

* + Stimulates milk production in female that was not ready to produce
  + A highly productive female can be spread over a larger area to benefit many farmers.
  + It is easier to transport embryo in test tubes than the whole animal
  + Embryo can be stored for long periods awaiting availability of a recipient female. (4x½=2mks)

6.(a) stock and die —used for cutting threads on pipes Pipe cutter — used for cutting PVC pipes 1 mark

(b) Ball pein hammer — used for riveting and striking the head of cold chisel /straighten bent metal surface. Claw hammer —used for driving and removing nails from wood /straightens bent nails ( 1 mk)

7 Factors that determine water intake

* -Type of feed
* -Physiological status of the animal
* -Ambient temperature
* -Species of the animal
* -Age of the animal/size /weight
* -Level of production (4 x½=2 mks)

8.(a) Signs of furrowing in pig (2mk)

* -Restlessness
* -Vulvas swells and reddens
* -Udder becomes full with a milky substance
* -Sow starts to build a nest by collecting some bedding at one corner

9. - a crush

* + ball ring and a lead stick
  + with halters
  + use of lead yoke
* -ropes (3x½=l½mks)

10. –

* Washing the udder with warm water
* Familiar noises
* Sucking from calf
* Feeding with concentrates
* Presences of milk man
* Presences of milk utensils
* Milking at regular times (4x ½ =2mks)

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| 11.Cropping is the removal of fish of marketable size from the pond while harvesting is the removal of all the fish from the pond. |

12 a) — Friesian (½mk)

b) —Jersey (½mk)

13. - Ages

* + stage of caetation period
  + udder attachment / loosely/ pendudus
  + incomplete milking
  + Mechanical injuries
  + poor sanitation
  + poor milking technique (4 x ½ = 2 mks)

14—Solar energy

* + Wind power (2 x ½= lmk)

15. - Body size / body weight

* + Available feeds stuffs
  + Nutrient composition of feedstuffs available
  + cost of feeds
  + ingredients required
  + level of production of animals
  + Age /stage of growth
  + Type of production e.g. broiler (4 x½= 2mks)

16. Pigs Ruminants

* - Do not chew cud chew cud
* - cannot regurgitate regurgitate food
* - cannot digest cellulose can digest cellulose
  + enzymatic digestion in the No ptyalin hence no enzymatic digestion mouth Jpresence of ptya Pin
  + Most digestion and absorption take Most digestion and absorption takes place in the Place in small intestine rumen

17. - When flowers are not available / during dry season

* + When a big number beehive is kept (2 x ½= 1 mk)

18 – injecting the male chick with stilbestrol

* + Inserting pellets of female sex hormones undernearth the skin of male chick

SECTION B

19a) A-Aveoli

* B-Gland cistern
* C-Teat Cistern
* D- Teat
* b) Oxytocin
* Adrenalin

***20.(a) identification of***

* + A – Lice
  + B – Flea
  + C – Liver fluke / *fasciola SSp ( 4x ½ =2mks)*
  + D- Roundworm / *Ascaris SSP*
  + (b) Differences
  + A and B are External / Ectoparasites (2x ½ =1mk)
  + C and D are internal parasites / Endoparasites
  + (c) Effective control liver fluke
* Eradicate water snail / round snail/ *lymnac SPP*
* Deworming / Use of Antihelruintics (1x1=1mk)
* Draining marshy areas

***21. (i) A- very cold***

* + B- very hot
  + C- Draught from one side (3x1=3mks)
* Reduce the amount of heat
* – Increase ventilation (2x1=2mks)
* (iii) To avoid suffocation of chicks (1mk)

***22.(a) Farm implement – ox- plough ( ½ mrk)***

* + (b) A- Mould board (2 ½ mks)
    - B – Share
    - C – Main beam
    - D - Land – wheel
    - E – Land – side
  + (c ) Function of (1 mrk)
  + C – Attachment of all parts
* Adds weight for deeper ploughing
* E – Stabilizes plough against thrust by furrows slices (1 mrk)

**SECTION C**

23. (a) - Disinfect the brooder 2 — 3 days before the day old chicks are brought in.

* + Spread newspaper over the litter to prevent chicks from eating litter. V1
  + Spread some food on the newspaper so that chicks can learn to eat.
  + Remove the newspaper when the chicks have learnt to eat from feeders
  + Feed on chkk mash upto 8” week.
  + Gradually introduce growers mash from week z
  + Debeak (on the 1th day)
  + Keep chicks in the brooder for 6—8 weeks.
  + Provide and maintain source of heat as necessary.
  + Provide adequate clean water
  + Vaccinate against common diseases especially New castle.
  + Control external parasites
  + Insulate sick chicks
  + Treat sick chicks.
  + Introduce roosts for perching (on 6th week)
  + Introduce grit / sand to help in digestion.
  + Hang green vegetable to keep them busy.
  + Feed on growers marsh to 18th — 20th week.
  + Gradually replace by layers mash from 18°’ week.
* A specific day/week must be indicated to award mark. (1 x½= ½mks)
* (b) (i) Ensure correct and adequate supply of food for fish through regular pond fertilized on.
* Control stocky rate to avoid overpopulation
* Control water pollution by removing debris
* Lime the fishpond regular.
* Maintain a steady supply of flowing water. This ensures that there is sufficient
* oxygen in the water
* Maintain appropriate level of water in the pond by regulating the flow of water in
* and out of the pond.
* Harvest the fish at the right stage of maturity.
* Control predators by facing off the pond
* Remove weed or grass that grows on the pond lining.

24. ***a) Daily maintenance and servicing of a tractor (10x1=10 mrks)***

* Check engine oil using dip stick and adjust accordingly
* Check fuel level
* Check water level in radiator
* Check level of electrolyte in the battery
* Check for loose nuts and bolts and tighten
* Grease moving parts
* Check tyre pressure
* Check and remove sediments in sediment owl
* Check fan belt tension and adjust accordingly
* Check the breaks and maintain break fluid level on recommended

***b)Structural requirements in construction of a calf pen (10 mrks)***

* Concrete floor – for easy cleaning.
* Spacious – to allow exercise and placement of equipment
* Singly – crawl spread of parasites
* Preventing licking one another and to control formation of hair balls
* Proper drainage – prevent dampness which predispose to infections
* Drought free – prevent cold winds which predispose to pneumonia
* Leak proof – Avoid damp conditions / wetness which predispose to navel ill; pneumonia
* Warm and dry – to avoid infections
* Well ventilated – allow proper air circulation in the structure
* Lockable / secure – provide security against predators / thieves

25 (**a) Factors affecting digestibility of food in livestock**

* Chemical composition of the feed e.g. % of lignin or cellulose will influencedigestibility
* The form in which the feed is offered to the animal e.g. crushed maize is more digestible than whole grain.
* The species of the animal e.g. the digestibility of grass is higher in sleep than inPigs.
* The ratio of energy to protein will affect digestibility. The higher the ratio the lower the digestibility
* The quantity of feed already present in the digestive system of an animal. b)
  + Healthy milking heard
* Should be free from milk-borne diseases such as brucellosis‘ and tuberculosis which is easily transmitted to man
* (ii) Clean milking cows
* The flanks underline and the whole udder should be washed and dried thoroughly before milking
* (iii) Healthy and clean milk –man
* A milker suffering from any contagious diseases should not be allowed to milk or handle milk (iv) Clean milking shed
* Milking she or palour should be kept clean ,free from dust or odours

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| * (v) | * Clean milking utensils |  |  |
| *  | * The milking utencils and equipments | should be seamless, smooth with joinfillefacilitate easy cleaning | |
| * (vi) Milk filtration /cooling and storage | | to 5C0 immediately after milking immediately after milking | |
| *  | * Milk should filtered and cooled down |
| * (vii) Avoid flavours in milk | |  |  |
|  | * Bad flaours in milk are caused by foodstuffs and ovulation should be avoided before milking | | (7 x1 = 7mks) |

* + Disadvantages of Natural method of mating
* High chances of in breeding or in breeding is not controlled.
* High chances of breeding disease transmission ie brucellosis or parasites such as trichonomas spp
* Males require extra pasture to feed on.
* Large males can injure small females.
* A lot of semen is wasted as single ejaculation produce semen that can serve several cows.

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| ˗It is cumbersome and expensive to transport a bull to hot areas to serve cows.   * (5 x 1 = 5mrks) |