443/ 2 AGRICULTURE (2017)
PAPER 2   *MARKING SCHEME*

1. Breech of birth is a presentation during parturition where the hind legs of a new born come out first.   1mk

2.

Description	Cattle	Pigs	Poultry
Young from birth/ hatching to weaning	Calf	piglet	
Young female b4 first parturition	Heifer		Pullet
Mature male for breeding		boar	cock

3.   To stimulate growth and production
        - To prevent disease attacks
        - To improve feeding habits (appetite).   (Any 2 x ½ = 1mk)

4. *Implements used for secondary cultivation.*
        - Disc harrow.
        - Spike toothed harrow.
        - Rotavator.
        - Ox- tine harrow
        - Chain harrow.
        - Zigzag harrow.
        - Sprung tine harrow.   4 x ½ =2mrks.

5.   -   Avoid poisoning by chemicals or lead that may be in paints.
        - To discourage/avoid tainting of milk if shed is used immediately after painting
        -Discourage insects from inhabiting the shed   2 x ½=1m

6.   *Uses of wind power of the farm*
        i)   Winnowing of crops
        ii) Driving machines e.g. wind mill   2 x ½=1m

7.   -Oxytocin   -Adrenaline   2 x ½=1m

8.
Pin   -   Head
    -   Shoe   -   Stem
    -   Thumbscrew   any 2 x1= 2m

9.   - Keeps birds busy scratching, hence reduce cannibalism
        - Gives comfort and warmth to the birds
        - Helps in drying droppings   any 2 x1= 2m

10.   - Disinfect the teats
        - Apply milking salve on teats
        - Weigh the milk
        - Cooling the milk
        - Straining/ sieving the milk
        - Clean utensils   4 x ½ =2mrks

11.   Mastitis   Milk fever   2x ½= 1mk

12.   Checking the level of electrolyte and adding distilled water if plates are exposed.
    -    Checking specific gravity using hydrometer and adjusting accordingly.
    -    Cleaning the terminals if dirty.
    -    Recharging if the voltage is low.   4x ½ = 2mks

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

14.   Collect eggs regularly and frequently.
    -    Make nests dark
    -    Feed balanced diet.
    -    Debeak perpetual egg eaters.
    -    Supply green leaves to keep birds busy.   Any 4x ½ =2mks

15.   – Anthrax   - Black quarter/leg   2 x ½ = (1mk)
       - Vaccine – Blanthrax   1 x ½ = (½mks)   *Mark as a whole*

16.   Flushing the tubes under high pressure to it.
       -Greasing / oiling rotating parts in the pump
       -Storing it to dry upside down after thorough washing   3 x ½ =   1½mks

17.   *Advantages of jersey*
       - Hardly / withstand high temperatures
       - Needs less food
       - Excellent grazer on fairly poor pastures.   ½ x 2 = 1mk

18.   -Makes a vertical cut into the soil ahead of the share to separate the furrow slice from
             unploughed land.
    -    Cut any trash on the surface   2 x ½ = (1mk)

19.   - Sahiwal   - Red poll   - Simmental   - Brown Swiss   2 x ½ = 1mk

20.   a)   G-Liver fluke (*Fasciola ssp*)   H -Round worms (*Ascaris ssp*)
             S -Tape worms   (*Taenia ssp*)   3 x ½ =1½mks

       b)   Internal/endoparasites.   1 x ½ = (½mk)

       c)   G – Liver fluke is found in the bile duct/ gall bladder / liver.
             S -Tape worm are found attached on the wall of the small intestine. (2 x ½ = 1mk

       d)   -Control of fresh water snail by physically killing them.
    -    Control of fresh water snail by use of adding $CuSo_4$ solution to stagnant water.
    -    Draining swampy areas:
    -    Burning swampy bushes during dry weather.
    -    Avoid grazing affected animals near marshy or swampy areas.
    -    Routine drenching with suitable. Anthelmintic.
    -    Rear ducks which feed on snails.   3 x ½ = (1½mks)

21. a) Wire guard ½mk

- b)
- X – Cold/low temperatures thus making chicks move closer to the heat source. (1mk)
- W – Draught/strong wind from one side which makes them to move to the opposite side.

2 x1= 2m

22.

15 parts maize
= ½ mk
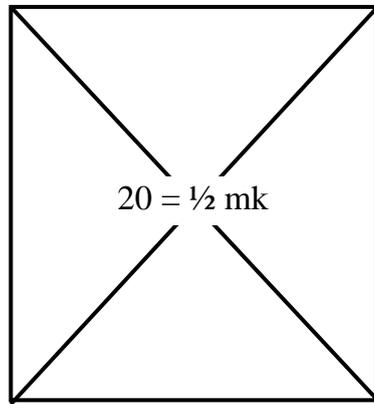
Maize 10 = ½ mk

20 = ½ mk

Sunflower 35
= ½ mk

10 parts sunflower = ½ mk

Total 25 = ½ mk

- Amount of maize $= \underline{15} \times 200 = 120kg$ ½ mk
-                   25
-
- Amount of sunflower $= \underline{10} \times 200 = 80kg =$ ½ mk
-                   25

23. a) 1. Spark plugs 2. Distributor/rotor 3.Ignition coil 4. Battery   4 x ½ = 2mks

   b)   1.   Produce sparks required for ignition during power production at the combustion chamber
        2.   Distribution of electrical energy in the correct order to the various spark plugs.
        3.   Converts low voltage from the battery to high voltage current of 6000 colts required to provide a spark at the spark plugs.   (3 x 1 = 3mks)

   c)   - Remove carbon deposits on the spark plugs
        - Replace spark plugs whereas electrons are worn –out
        - Clean contact breaks
        - Replace condenser regularly
        - System should be kept dry
        - Ignition wires should all be insulated.   (**3mks**)

24. a)   - Security : Located near homestead eg poultry house.
   - Accessibility: should be connected with roads for easy of transportation of inputs/outputs
   - Soil type – Should be well drained and unproductive
   - Drainage / Gradient: When there is free flow of water
   - Nearness to water sources eg. Vegetable nursery for easy irrigation
   - Social amenities: Homesteads to be near schools, hospitals and churches
   - Other infrastructure such as near roads and power lines
   - View of farm (panoramic)
   - Future expansion space to be left for future expansion   (10 x 1 = 10mks)

b) *Advantage of fences*
- They mark boundaries
- Keep off intruders / thieves
- Control grazing/ facilitate rotational grazing
- Prevent damage of crops by animals
- Control breeding
- Act as wind breaks
- Control of pests and diseases by preventing entry of wild and sick animals
- Live fences have aesthetic value
- Provide livestock feeds, firewood, mulch and compost manure material
- Add value to farms   (5 x 1 = 5mks)

c)   - Cementing the posts
- Inserting droppers between standard posts
- Supporting the corner posts with struts and strainers
- Tightening the wire strainers
- Fixing braces to support the fencing posts   (5 x 1 = 5mks)

25.   a) *Parts of a cattle dip and their functions*
(i) Holding yard/assembly yard/lead in pen/concrete floor - for holding animals before dipping
(ii)   Foot bath - 4 m long 25 cm deep
- i.e. rough concrete floor
- wash feet of animals
- contains chemicals for controlling foot rot
(iii)   Lead in gang – narrow entrance
- Allows animals to jump singly into the dip tank.
(iv)   The jump / leaf in ramp
- Taken off point where the animal jump into the distance
(v) Dip tank / plunge dip
- Deep water tank below the ground level
- Contains acaricide
(vi)   Exit ramp
- Stairs that lead to the drinking race
- Allows animals to come out of the dip wash slowly
(vii)   Draining race / drip gang way
- Has a sloping floor towards the dip tank
- Allows dip wash to drain back to the dip tank
(viii)   Drying yard
Animals are restrained before being released.
(ix)   Silt trap outlet
Trap silt and dung as the dip wash floors back into the distance
(x) Dip tank shelter / roof
- Above the dip tank
- Lowers evaporation of dip wash
(xi)   Water tank / reservoir tank – for storing water
(xii)   Waste pit – dumping sediments from the dip tank
              Stating ½ x 12 = 6mks   Function ½ x 12 = 6mks

(b)   *Three differences between a petrol engine and a diesel engine*
    (i)   A petrol engine has a carburetor while a diesel engine has an injector pump
    (ii) In a petrol engine fuel and air first mix in the carburetor while in a diesel / engine they mix in the cylinder
    (iii) In petrol engine produces little smoke / complete combustion while a diesel engine produces a lot of smoke / incomplete combustion
    (iv) A petrol engine is relatively light and suited for light duties while a diesel is relatively heavy and suited for heavy duties   3 x 1 = 3mks

(c)   *Maintenance practices of a tractor battery*
- Level of electrolyte should be kept just above the plate topping is with distilled water.
- Corroded terminals should be scrapped, cleared and smeared with grease
- Should be tightly fixed in a box to avoid spillage and damage
- Battery should be fitted / connected correctly
- During long storage the battery should be emptied and kept upside down
- Generator fan belt should always be functional to ensure the battery is always charged.
                                                       Any 3 x 1 = 3mks

(d)   *Methods of attaching the tractor drawn implements*
- Through the draw bar
- Through hydraulic system
- Through power take off   2 x 1 = 2mks

26.   a)   Clean and disinfect the far rowing pen
- Wash / clean and disinfectant the sow.
- Treat the sow against external parasites
- Move the sow to a furrowing pen – 3 days before furrowing
- Provide a creep area.
- Provide clean bedding maternal
- Provide bran for the sow after furrowing.
- Ensure piglest are breathing.
- Ensure piglets suckle colostrum
- Disinfect umbilical cord of piglets.
- Weigh piglets on day one to get birth weight
- Dispose the after – birth
- Dispose-off born still piglets on day 1 to attain birth weight.
                     Stating ½ mk + Explaining ½ mk = 12mks.

    b)   - Old age
- Health of a boar
- Serious injury of the boar
- When daughters are used as replacement stock / to avoid inbreeding.
- When boar is too fat and lazy.
- Poor performance of offsprings
- Lack of libido / infertile boar.
- Bad temperament
                     Stating ½ mk +Explaining ½ mk 8mks.