AGRICULTURE PP2 MARKING SCHEME 2021

SECTION A

1. **Apiculture -** keeping of bees.
2.
   - BROWN EAR TICK - East Coast Fever, Corridor disease, Nairobi sheep disease.
   - TSETSEFLY - Trypanosomiasis/ Nagana

3. ***Intermediate host for liverfluke Fasciola spp.***
   Fresh water snail/Lymneaspp

4. ***Breeds of rabbits***
   - Chinchilla
   - Carlifonia white
   - Newzealand white
   - Earlop
   - Martensable
   - Flemish Giant

5. ***Functions of a crop in a digestive system of chicken.***
   - Mixes and softens food with water
   - Temporary storage of water

6. ***Ways of restraining cattle.***
   - Use of rope/halters/casting
   - Use of lead stick and bull ring
   - Use of crush
   - Use of head yoke
   - Use of isolation yard/ pen
   - Casting.

7. ***Livestock diseases caused by virus.***
   - Gumboro/infectious Bursa disease
   - Fowl pox
   - New castle disease
   - African Swine fever
   - Foot and mouth disease
   - Rinderpest/cattle plague
   - Lumpy skin disease
   - Bird flu
   - Mareki disease
   - Mad cow disease

8. ***Types of selection practiced by livestock farmers.***
   - ✓ Mass selection
   - ✓ Progeny testing
   - ✓ Contemporary comparison.

9. ***Ways of preventing predation in a fish pond.***
   - ✓ Fencing with mesh wire
   - ✓ Placing sieve at inlet

10. ***Functions of feed additives in livestock production.***
    - Prevent diseases
    - Promote growth of milk secretion
    - Increase efficiency of feeds

11. ***Types of calf pens***
    - Movable
    - Permanent

12. ***Advantages of embryo transplant.***
    - Stimulate milk production.
    - Highly productive female can spread over and benefit many farmers
    - Easier to transport than whole animals
    - Embryos can be stored for a long period.
    - Possible to implant embryo from high quality female.

13. ***Roles of testis in male reproductive system.***
    - Production of spermatozoa
    - Secretion of male sex hormone

14. MOTHERING ABILITY- ability of the dam/mother to take care of offspring until weaning.
    PROLIFICACY-ability of female to give birth to many offsprings at the same time

15. ***Ways in which feeding contributes to disease control.***
    - Prevents deficiency diseases
    - Improves animal's ability to resist diseases.
    - Contains herbal medicine against diseases

16. *Functional differences between rumen and abomasum*
    Rumen
    Temporary storage
    Biological digestion
    Abomasum
    True stomach
    Secrets digestive enzymes

17. Four practices carried out in the crush ½ x 4 (2 mks)

- Dehorning
- Hoof trimming
- Vacinnation / injection
- A.I.
- Pregnancy diagnosis
- Spraying
- Castration
- Identification

18. Three dual purpose cattle breeds ½ x 3 = 1½mks

- Sahiwal
- Red poll
- Simmental

19. Three terms used to describe the following: -

(i) Mature male pig : boar
(ii) Sterilised birds : Capon
(iii) Mature female goat : Doe / nanny ½ x 3 = 1½mks

20. Four reasons for identifying farm animals ¼ x 4 = 2mks

- Facilitate selection and breeding
- Facilitate feeding
- Facilitate record keeping
- Facilitate culling
- Facilitate disease control and treatment.

21. Four factors that determine the quality of honey ½ x 4 = 2 mks

- Type of plant from which nector was obtained
- Maturity stage of honey at harvesting time
- Method of harvesting
- Method of processing

22. Four categories of livestock diseases ½ x 4 = 2 mks

- Bacterial
- Viral
- Protozoan
- Nutritional

23. Three tools used for plumbing ½ x 3 = 1½mks

- Pipe wrench
- Pipe cutter
- Stock and die
- Hacksaw
- Adjustable spanner
- Screw drivers
- Sash clamp
- Tape measure
- Combination square

24. Four maintenance practices carried out on an ox-drawn plough ¼ x 4 = 2 mks

- Lubricate land wheel bearing / moving parts
- Replace worn out share
- Sharpen blunt share
- Tight loose bolts and nuts
- Clean after use
- Proper storage / in a shed
- Before long storage paint / coat with old engine oil / any other anti-rust substance to prevent rusting.

25. Four sources of farm power which are environmental friendly ¼ x 4 = 2 mks

- Solar power
- Wind power
- Water power
- Human power
- Animal power
- Electricity
- Biogas

26. Four functions of the lubricating system in a tractor ¼ x 4 = 2 mks

- Reduce friction / increase efficiency
- Prevent rusting
- Prevents tear and wear
- Cleaning agent
- Reduce heat

27. State two conditions under which a farmer would prefer to use an ox-cart instead of a tractor-drawn trailer ½ x 2 = 2 mks

- In case of inadequate capital
- Small load to carry
- Too steep an area to use a tractor.

28. State four qualities considered when selecting a heifer for dairy purposes ½ x 4 = 2mks

- Body conformation / Triangular shaped / wedge shape
- From high milk yielding family
- Well adapted to the environment
- Free from physical defects
- Healthy / free from disease
- Docile / easy to handle

29. Give one role of a damp proof course in the foundation of a farm building mk 1 x 1 = 1
    - Prevents moisture from rising up the wall
    - Prevents termites from climbing up the wall.

SECTION B

30.

a) 1: Eggs hatch and larvae emerge
4: Nymphs climb onto a 2nd host and feed
5: Engorged nymphs drop down to lay eggs
7: Engorged female drops to lay eggs ***4 x½ = 2 mks***

b) Tick keeps on dropping off the animals at every stage of development , so it is not affected by acaricides when the animal is sprayed / dipped ***1x½ = 1 mk***

c) **Most common sites where ticks are found**

- Ears
- Base of the horns
- Around the eyes
- Tail switch

d) **Examples a three host**

- Brown ear tick
- Boot tick
- East African boot tick

31.

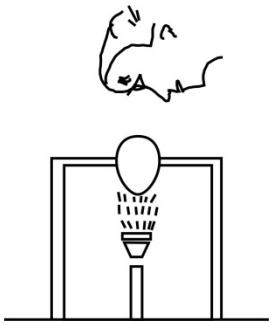
(i) Wool shearing ***(½ mk)***
(ii) Shearing should be done on clean floor free of grease

Care should be taken not to cut skin, testicles, udder, vulva and penis

(2 x 1 = 2mks)

(iii) Once in a year ***(½mk)***

32. Below in an activity carried out in poultry production. Study it carefully then answer the questions that follow.



(a) Identify the practice being carried out : egg candling (1 mk)

Three defects that can be detected by this practice (1 x 3 = 3 mks)

- Size of air space
- Fertility
- Very porous shell
- Blood spot
- Meat spot
- Double yolk
- Broken shell
- Hair cracks

c) Two disadvantages of artificial incubation. (1 x 2 = 2 mks)

- High initial capital / expesive to buy incubator
- Labour demanding
- Requires high skills
- High risk of damaging all eggs.

33. Use the above diagram of a calf pen to answer the questions that follow.

a) How high should the calf pen be raised from the ground: **50cm** (1mk)

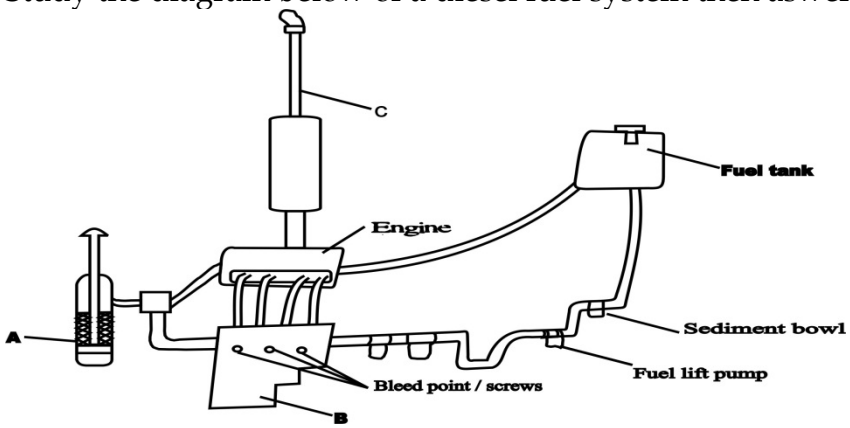
b) **Give any two reasons why calves are housed singly** 1 x 2 = 2mks

- Avoid calves licking each other / formation of hair balls.
- Avoid spread of diseases / parasites

c) Why should the calf pen be near the milking parlour? 1 x 2 = 2mks

- Avoid contamination of milk
- Calf takes milk at mother's body temperature
- Minimize problem of scouring

34. Study the diagram below of a diesel fuel system then aswer the questions that follow



a) Identify the parts labelled (3 mks)

A - Air cleaner (1 mk) B - Injector pump (1 mk) C - Exhaust pipe (1 mk)

b) Three maintenance practices carried out on the system 1 x 3 = (3 mks)

- Replace / clean oil filters as recommended
- Remove and clean sediment bowl regularly
- Replace worn out injectors
- Bleeding should be done in case air is entrapped in the system.
- Replace dirt from air cleaner / clean air cleaner element by blowing with air (dry type)

35.

SECTION C

36. Five signs of heat in a cow 1 x 5 = (5 mks)

- ✓ Restlessness
- ✓ Mounting on others / stands still when mounted
- ✓ Slight increase in body temperature
- ✓ Drop in milk production in lactating cows
- ✓ Reddish and swollen vulva
- ✓ Clear / slimmy mucus from vulva
- ✓ Bellowing / mooing frequently
- ✓ Frequent urination

b) Five causes of stress in poultry and describe their control (10mks)

- Sudden change in routine practices
- Sudden change of feed
- Presence of predators / strangers in the house
- Attack by external parasites and diseases
- Sudden loud noise
- Abrupt change in weather
- Poor handling of birds during routine practices
- Inadequate feed and water
- Overcrowding

Control

- Change of routine practices should be gradual
- Change in feed should be done gradually.
- Seal the house against predators.
- Control parasite and disease attack promptly.
- Locate the poultry house in an appropriate place free from noise.
- Insulate the house against weather elements.
- Handle the birds properly
- Provide adequate feed and water to birds.

Ensure proper floor space

[Five causes and their control 1 x 10 = 10 marks]

c) Using pearson's square compute a ration with 20% DCP from oats which contains 10% DCP and simsim seedcake containing 60% DCP. ½ x 10 = (5mks)

10 parts of simsim
50 parts

Oats - $\frac{40}{50} x100$ = 80 kgs of oats

Simsim - $\frac{10}{50} x100$ = 20 kgs of simsim

37. a) Daily maintenance practices that should be carried out on a farm tractor 1 x 8 = 8 mks

- Check oil level / level of oil in the sump using dip stick
- Check level of fuel in the tank
- Check level of electrolyte in the battery and adjust accordingly.
- Check level of water in the radiator and top up.
- Grease moving parts
- Check fan belt tension and adjust accordingly.
- Check tyre pressure and adjust accordingly
- Tighten loose bolts and nuts
- Open and remove dirt from sediment bowls

b) Outline twelve general symptoms of endoparasite attack in livestock. 1 x 12 = 12 mks

- Emaciation
- Decline in production
- Staring / rough coat
- Oedematous swelling under the jaw.
- Diarrhoea
- Pot-belly
- Persistent cough
- Anorexia / loss of appepite
- Eggs / parasite in faeces
- Depraved appetite / abnormal appetite
- Blockage / obstruction of internal organs
- Anaemia

38. a) State four advantages of using a sub soiler in seedbed preparation (4mks)

- Used in breaking hard pan
- Facilitate aeration
- Facilitate water infiltration
- Help in pulling deep rooted weeds
- They loosen up the the soil through the vibration they make

b) Give five advantages of artificial insemination in cattle management (5mks)

- Controls breeding diseases /parasites
- Controls breeding
- Its quicker method of obtaining a proven bull
- It is easy and cheap to transport semen to far areas
- Semen from a superior bull can be used to serve many cows
- Farmers who cannot afford to buy a superior bull can access the service at a low cost
- Bulls that cannot serve naturally due to physically injuries/defects can be utilized
- Prevents injuries to cows by heavy bulls

(c) State five function of water in animal's body (5mks)

- Acts as solvent for chemical Substances
- Its a medium of transport of nutrients in the animals body
- Help in excretion of waste product from animals body
- Regulates temperature through sweating and evaporation
- Maintaining solute –solvent balance in body fluids (osmoregulation)
- Make cells turgid ;maintaining the shape of the body cells
- Used in bio chemical reactions in the body e.g digestion of food
- It's a component of body fluids
- Describe control measures for tape worm in livestock (6mks
- Use of prophylactic drugs
- Keep animal houses clean and disinfected
- Practice rotational grazing and rest pastures to starve larvae to death
- Keep feeding and watering equipment clean
- Use of latrine by farm workers/proper disposal of human exceta
- Proper meat inspection
- Proper cooking of meat