 **AGRICULTURE PP2 MARKING SCHEME 2021**

**SECTION A**

1. **Apiculture -** keeping of bees.
* BROWN EAR TICK - East Coast Fever, Corridor disease, Nairobi sheep disease.
* TSETSEFLY - Trypanosomiasis/ Nagana
1. ***Intermediate host for liverfluke Fasciola spp.***

Fresh water snail/Lymneaspp

1. ***Breeds of rabbits***
* Chinchilla
* Carlifonia white
* Newzealand white
* Earlop
* Martensable
* Flemish Giant
1. ***Functions of a crop in a digestive system of chicken.***
* Mixes and softens food with water
* Temporary storage of water

1. ***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.
1. ***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
1. ***Types of selection practiced by livestock farmers.***
* Mass selection
* Progeny testing
* Contemporary comparison.
1. ***Ways of preventing predation in a fish pond*.**
* Fencing with mesh wire
* Placing sieve at inlet
1. ***Functions of feed additives in livestock production.***
* Prevent diseases
* Promote growth of milk secretion
* Increase efficiency of feeds
1. ***Types of calf pens***
* Movable
* Permanent
1. ***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.
1. ***Roles of testis in male reproductive system.***
* Production of spermatozoa
* Secretion of male sex hormone
1. 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

1. ***Ways in which feeding contributes to disease control.***
* Prevents deficiency diseases
* Improves animal’s ability to resist diseases.
* Contains herbal medicine against diseases
1. *Functional differences between rumen and abomasum*

**Rumen**

Temporary storage

Biological digestion

**Abomasum**

True stomach

Secrets digestive enzymes

1. Four practices carried out in the crush ½ x 4 (2 mks)
* Dehorning
* Hoof trimming
* Vacinnation / injection
* A.I.
* Pregnancy diagnosis
* Spraying
* Castration
* Identification
1. Three dual purpose cattle breeds ½ x 3 = 1½mks
	* Sahiwal
	* Red poll
	* Simmental
2. 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

1. 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.
1. 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
1. Four categories of livestock diseases ½ x 4 = 2 mks
* Bacterial
* Viral
* Protozoan
* Nutritional
1. 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
1. 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.
1. 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
1. 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
1. 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.
1. 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
1. Give one role of a damp proof course in the foundation of a farm building 1 x 1 = 1 mk
* Prevents moisture from rising up the wall
* Prevents termites from climbing up the wall.

 **SECTION B**

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

 (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)***

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

 

1. Identify the practice being carried out : egg candling (1 mk)
2. 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.

1. 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
1. 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)

 **SECTION C**

1. 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)

Oats 10%

40 parts of oats

20

Simsim 60%

10 parts of simsim

50 parts

Oats -  = 80 kgs of oats

 Simsim -  = 20 kgs of simsim

1. 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
1. 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