**FORM 3 AGRICULTURE PAPER TWO**

**END TERM 1 EXAM MARKING SCHEME**

**SECTION A**

1) State any four signs of parturition shown by a cow (2mks)

-Distended adder which produces colostrums

-Swollen vulva with mucus discharge

-Slackened pelvic girdle

-Visible pin bones

-General restlessness

-Water bags appears and bursts

2) State the uses of the following tools and equipments (4mks).

 (a)Secateurs

 -Pruning tree crops, harvesting, cutting, planting vegetables materials

(b)Sickle

 -Cutting back pyrethrum stick, harvesting rice and grasses

(c)Bolus gun

 -Shooting solid drugs through the mouth

(d)Strip cup

 -Test milk for mastitis

3) State four maintenance practices carried out on a wheelbarrow (2mks).

 -Lubricate moving parts

 -Clean after use

 -Store when empty

 -Repair any broken part

4) Name the breed of rabbit which is white with one or more of the ears, paws or tail being black (1mk).

 -California white

5) State four conditions considered in citing an apiary (2mks)

 -Availability of flowers

 -Availability of water

 -well sheltered place

 -Free from noise

 -Well secured place

6) State four properties of a good vaccine (2mks)

 -Long keeping life

 -Easy to administer

 -Has no side effects on inoculation

 -Compatible with other vaccines

 -Single dose for long term immunity

7) State any four disadvantages of natural mating in livestock production (2mks)

 -Uncontrolled breeding

 -Expensive to keep a bull

 -Transmission of a breeding disease

 -Small females may be injured by big bulls

8) Outline four roles played by proteins in livestock nutrition (2mks)

 -Growth, repair of worn-out tissues

 -Synthesis of antibodies

 -Synthesis of enzymes and hormones

 -Synthesis of products

9) State any four benefits of steaming up in livestock (2mks)

 -Provides nutrients for good fetal growth

 -Builds up energy for parturition

 -Ensures birth of healthy offsprings

 -Improves health of the mother

 -Maintains high milk yield after birth

10) Name four reasons for castrating male calves (2mks)

 - Makes them docile

 - Breeding is controlled

 - Breeding diseases is controlled

 -Steers fastens faster

11) Name any four dairy breeds of goats (2mks)

 -Agio-nubian

 -Toggenburg

 -British alpine

 -jamna pan

12) List any four farm structures that are necessary for handling dairy animals

 - Crush

 -Fence

 -Milking shed

 -Calf pen

 -Cattle shed

13) Give four reasons why young rams should be docked (2mks)

-even fat distribution

-prevent blow fly infestation

-ease of mating

-minimize folding of wool with faeces

14) State two roles of a drone bee (1mk)

 - Mates with the queen

 -regulates temp of the hive by flapping wings

15) Give two advantages of using wood in construction of farm buildings (2mks)

 -it is cheap

 -easily available

 -easy to work with

 SECTION B (20 MARKS)

 *Answer all questions from this section*

16. Below is a diagram illustrating a type of a hive

1. Identify the type of hive illustrated above(1mk)

-log hive

 b) Why is it necessary to keep it in a slanting position (1mk?)

-To discourage honey badgers climbing on it

 c) State one disadvantage of the hive above (1mk)

-Honey mixes with brood

-Smaller to accommodate bees

-Heavy to raise or lower

1. Name any other two types of bee hives ( 1mk)

-KTBH

-Langstroth

-Box

1. List down four factors causing the swarming of bees (2mks)

-Bad smell

-Noise

-Overcrowding

-Sick/ infertile queen

1. Name one type of disease affecting bees (2mks)

-Acarive

 -American foul brood disease

17. The diagrams below represent some farm tools and equipment

1. Identify the tools (2mks)

A-stock and die

B- Plumb bob and line

1. State the use of each of the tools labeled C and D (2mks)

C-chops forage for livestock

D-shearing wool from sheep

1. State one maintenance practice carried out on tool D (1MK)

-cleaning after use

-sharpening blades

1. A ration containing 20% DCP is to be prepared
2. The available maize contains 7% DCP and fish meal 62% DCP. Calculate using Pearson square method, the amount in kgs required to prepare 100 kg of the feed (5mks)

Maize =42/55 \*100=76.4 kg

Fish meal=13/55 \*100=23.6 kg

Labeled square=2mks

1. Apart from Pearson square method, name any other method that can be used to prepare rations (1mk)

-trial and error method

 19. The diagram below shows a certain practice carried on pigs.

1. Identify the practice (1mk)

-ear notching

 b) Name the tool used to carry out the practice above (1mk)

 -ear notcher

 c) State any other two methods of identifying piglets (1mk)

 -ear tagging

 -ear tattooing

 SECTION C (40marks)

 *Answer any two questions from this section*

1. a) Describe six signs of farrowing in a sow (6mks)

-restlessness

-enlarged vulva

-slacked muscles

-loss of appetite

-enlarged udder

-makes a nest

b) Explain six benefits of the Kenya Top bar hive (6mks)

 -bars can be removed for inspection

 -honey combs can be removed without disturbing the brood

 -high quality honey is achieved

 -more wax is harvested

 -easy to construct and repair

 -cheaper to construct

 c) Describe 8 factors considered when citing farm structures (8mks)

 -location should be at central position of the farm

 -all farm structures accessible

 -well drained

 -related structure built close to another

 -farmers tastes and preferences

 -stenchy enterprises to be on leeward side of homestead

 -amenities i.e. water and electricity to be near homestead

 -construct on a gently sloping land

21. a) Describe five reasons for maintaining farm tools and equipments (5mks)

 -increase durability

 -reduce replacement cost

 - increase efficiency

 -avoid injuries to user

 -avoid damage to tools

 b) State five differences between ruminants and non-ruminants (5mks)

 Ruminants non-ruminants

|  |  |
| --- | --- |
| Chew cud | Don’t chew cud |
| Have four stomach chambers | One stomach chamber |
| Regurgitate food | Don’t regurgitate |
| Digest cellulose | Cannot digest |
| No ptyalin in saliva | Have ptyalin in saliva |
| Most digestion in rumen | Most digestion in intestines |
| Alkaline saliva due to ammonia | Ph is neutral |

c) Describe the various methods of treating timber for construction (10mks)

 -Drying-seasoning to prevent warping; rotting

 -Chemical treatment-against insects

 -sap displacement method

 -pressure or vacuum treatment

 -hot and cold soaking

22. a) Discuss five human factors influencing agriculture (10mks)

 -level of education and technology

 -health HIV/AIDS

 -economy

 -government policy

 -transport and communication

 -cultural practices and beliefs

 -market forces

b) Explain any five post harvest practices on cereal crops (10mks)

 -threshing

 -drying

 -cleaning

 -sorting and grading

 -processing

 -packaging