INTERNATIONAL TEACHERS TRAINING COLLEGE

2013

P1 AGRICULTURE

Mock 1

February 2020

MARKING SCHEME

PRIMARY TEACHER EDUCATION

AGRICULTURE

MARKING SCHEME

(CONFIDENTIAL)

This marking scheme consists of 8 printed pages.

SECTION A (30 marks)

1. (a)
- Legible - can be read from far (- big and clear lettered)
- Simple with few but vital information
- Has margins drawn
- Has a title
- Title has a good symmetry
- Labelling the parts of the animal

4 x 1 = 4 marks

(b)
- Some animals may scare pupils
- Some animals are too big to bring into live classroom
- Some animals require handling with care which may not be available
- Some animals require that they remain in their natural habitat without disturbance;
- Some animals are too small to be seen or handled e.g. micro-organisms
- Some of the animals are dangerous or harmful to handle e.g. snakes, spiders, e.t.c

4 x 1 = 4 marks

2. (a)
- All details are filled in the template;
- Three theory lessons and one double practical lesson;
- The lessons are learner centred: Actively engage the learners;
- Lesson objectives are properly stated;
- Lesson objectives are aligned to the specific objectives in the syllabus extract;
- Mode of assessment is specified;
- A variety of teaching methods are specified;
- The use of teaching/ learning resources is specified.

8 x 1 = 8 marks

(b) By the end of the topic, the learner should be able to construct a food chain.

(2 marks)

(c)

Topic;	**Specific Objective;**	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	TOTAL
Plants	Explain interdependence between plants		3					3
	Explain interdependence between		3					3
	Explain what a food chain is			2				2
	Explain the meaning of crop pests		3					3
	Identify some crop pests, their effects and control measures	3	3	3				9
Total		3	12	5				20

6 x $\frac{1}{2}$ = 3 marks

- Topic - plants
- Specific objective (S);
- Cognitive levels;
- Total 2 x 1;
- Weighting - more comprehension and less others;

(6 x $\frac{1}{2}$ = 3 marks)

3. (a)
- Plan the demonstration;
- Try out the demonstration;
- Perform the demonstration before the students;
- Discuss safety measures;
- Lead learners to try out the demonstration;
- Allow each learner to attempt the demonstration;

3 x 1 = 3 marks

(b)
- Plan to ensure there is a logical sequence;
- Obtain the apparatus and rehearse the demonstration;
- Arrange the apparatus to create a suitable atmospheric for learning;
- Discuss the safety measures;
- Ask a pupil to explain the demonstration;
- Ask a volunteer to attempt the demonstration as other pupils observe and sport mistakes;
- Allow pupils to attempt the demonstration as the teacher supervises and corrects mistakes;

4 x $\frac{1}{2}$ = 4 mks
(4 x $\frac{1}{2}$ = 2 marks)

(c)
- Demonstration;
- Practical;

2 x $\frac{1}{2}$ = 2 mks
(2 x $\frac{1}{2}$ = 1 mark)

SECTION B (40 marks)

4.
- Demonstration/Experimental plots for carrying out trials or experiments of various husbandry practices;
- Crop museum where different crops are grown in the school agroecological zone and those not grown in the school are planted;
- Project plots: class, individual, groups or young farmers club projects are located;
- Livestock section:- where different breeds and species of livestock are reared;
- Commercial section:- for commercial production to generate income for the school;
- Farm buildings and structures: stores, livestock houses, livestock handling structures and workers house are located;

4 x $\frac{1}{2}$ = 2 marks

5.
- Directly on farms;
- Indirectly on agricultural related industries;

2 x $\frac{1}{2}$ = 1 mark

6. - Feed on the plants reducing yield;
- Transmit crop diseases;
- Damage plant parts exposing it to secondary infection;
- Increases cost of production;
- Reduces the quality of agricultural products;

$4 \times \frac{1}{2} = 2$ marks

7. - Used to settle foreign debt;
- Used to improve foreign goods;

$2 \times \frac{1}{2} = 1$ mark

8. - Application of agricultural lime;
- Application of basic fertilizers;
- Application of sulphur;
- Application of acidic fertilizers e.g. sulphate of ammonia;
- Application of gypsum;

$4 \times \frac{1}{2} = 2$ marks

9. (a) **E** - wire strainer $\frac{1}{2}$ mark

F - clamp; $\frac{1}{2}$ mark

(b) - Pruning soft branches; $\frac{1}{2}$ mark

(c) - Sharpening the cutting edges;
- Oiling to prevent rusting; $\frac{1}{2}$ mark

10. - Size of planting materials:- Big seeded crops require fairly rough seedbed compared to small seeds; → type of implement used in 1° cultivation
- Slope of land:- sloppy land should have a fairly rough seedbed to prevent erosion;
- Soil moisture content:- dry soils require less cultivation operations to conserve moisture;
- Condition of the land after primary cultivation:- more trash or vegetation requires more operations to bury them or destroy all the weeds;
- Skills of operation:- skilled labour is more efficient hence less number of cultivations;
- Time available:- more time, more cultivations;
- Costs involved:- more cost, less cultivations;

$4 \times \frac{1}{2} = 2$ marks

11. - Bulkiness;
- Its more laborious;
- Spreads diseases/pests/weeds;
- Loss of nutrients on poor storage;
- Has scorching effects if not properly decomposed;

$4 \times \frac{1}{2} = 2$ marks

12. - Control of tsetse flies allows livestock to be kept and humans being to occupy the area and practice agriculture; (1 mark)

- Pure/clean
- High germination percentages;
- Certified;
- Suitable for the ecological conditions;
- Healthy;
- Free from physical deformities;

$4 \times \frac{1}{2} = 2$ marks

14. (a) - Is a plant growing where it is not required and whose economic disadvantages outweigh the advantages; (1 mark)

(b) - It may not be required in the bean crop;
- It disadvantages in the bean crop outweigh the advantages;

(1 mark)

15. - Few birds are per fold;
- Requires more labour for moving the folds;
- Difficult to keep individual egg production records;
- Folds are not durable;
- Dirty eggs are produced;
- ~~Difficult to keep individual egg production records;~~

$4 \times \frac{1}{2} = 2$ marks

16. - Accessible;
- Secure;
- Well drained;
- Close to structures with related uses;
- Close to amenities e.g. electricity, water, e.t.c.
- Gently slopping area;
- In line with the farmer's tastes and preference;
- On the leeward side of the homestead;

$4 \times \frac{1}{2} = 2$ marks

17. - For animals to grow fast and mature early;
- Healthy animals have longer economic and productive life;
- To maximize production or performance;
- To produce good quality products;
- To prevent spread of diseases;
- Healthy animals are economical to keep;

$4 \times \frac{1}{2} = 2$ marks

18 - Use seamless utensils to facilitate cleaning;
- Wash with hot water and detergent; and rinse with clean water;
- Keep them in the sun to sterilize them;
- Use utensils with smooth and filled joints;

$4 \times \frac{1}{2} = 2$ marks

19 - To maximise the use of pasture;
- Reduces build-up of parasites and diseases;
- Evenly distributes manure in the paddocks;
- Pasture is given time to regrow;
- Excess pasture can be harvested and conserved;
- Management practices e.g. fertilizer application can be carried out in paddocks not in use;

$4 \times \frac{1}{2} = 2$ marks

20 - Marketing farmers' produce;
- Negotiating for fair prices for inputs and products;
- Keeping records of co-operative activities;
- Paying dividends to members;
- Educating members on their co-operation through field days, seminars, workshops, etc;
- Giving loans to members;

$4 \times \frac{1}{2} = 2$ marks

21 - Clearing the vegetation around the store;
- Dusting/disinfecting;
- Repairing broken and worn out parts;
- Regular cleaning;

$4 \times \frac{1}{2} = 2$ marks

22. - Carrying out practical projects in agriculture;
- Exposing youths to improved production technologies;
- Developing and enhancing leadership qualities;
- Using youths as agents of change;
- Participating in competitive shows;
- Field trips to places of agricultural interest;

$4 \times \frac{1}{2} = 2$ marks

23. - Extension and training services;
- Banking services;
- Credit services;
- A.I services;
- Research services;
- Marketing services;
- Veterinary services;
- Farm input supplies;

$4 \times \frac{1}{2} = 2$ marks

(a) - Soil capillarity; $\frac{1}{2}$

(b) - J; sandy soil; $\frac{1}{2}$

(c) - Clay soil; $\frac{1}{2}$

(d) - Soil texture;
- Soil pH;
- Soil structure;
- Drainage/porosity;

$3 \times \frac{1}{2} = 1\frac{1}{2}$ marks

SECTION C (30 marks)

25. (a) - Use of lethal temperature e.g. too cold or too hot to kill or deactivate them;
- Proper drying of product to make them hard for pests to penetrate and prevent growth of moulds;
- Flooding kills the pests by drowning them;
- Suffocation in carbon dioxide enriched storage containers;
- Physical destruction of the pests by picking or trapping and killing;
- Use of scarecrows to scare large animals and birds out of the farms;
- Use of physical barriers to prevent pests;
- Use of electromagnetic radiation to deactivate or kill the pests;

5 x 1 = 5 marks

(b) - Crop root depth:- deep rooted crops should be alternated with shallow rooted;
- Crops nutrient requirements - heavy feeders should come first in newly opened land;
- Weed control:- crops associated with certain weeds should not follow one another;
- Pest and disease control:- crops of the same family should not follow one another because they have common pests and diseases;
- Soil fertility:- include leguminous crops to fix nitrogen into the soil;
- Soil structure:- a grass ley should be included to conserve the soil structure;

5 x 1 = 5 marks

26. (a) - Provides incentive for land conservation;
- Title provides security to secure credit;
- Provides incentive for long term investment projects;
- Owner can sell/give away whole or part of land;
- Is a more secure tenure system;
- It minimizes conflicts over land ;

5 x 1 = 5 marks

(b) - Have scorching effects;
- Change soil pH if used for long;
- Create minimal imbalances in the soil;
- Pollute environment when washed to water sources or through volatilisation;
- They have short residual effects;
- They are corrosive;

5 x 1 = 5 marks

27 (a) - Control the intermediate host (fresh water snail);
- Draining swampy areas;
- Burning pastures during the dry season;
- Not grazing in marshy or water logged areas;
- Routine drenching;

5 x 1 = 5 marks

(b) - Provides nutrients to maximise foetal growth;
- Helps build-up energy for parturition;
- Ensures birth of a health animal;
- Promotes good health of the mother;
- Increase and maintains high milk production after birth;

5 x 1 = 5 marks

25 (a) - Restlessness;
- Vulva turns red and swells;
- Udder becomes full with a milky fluid;
- Saw starts to build a nest;
- Discharge from the vulva;

5 x 1 = 5 marks

(b) - Top bars can be removed to inspect combs and be replaced;
- Honey combs can be removed without disturbing the brood;
- High quality honey is harvested without brood;
- More wax is harvested as combs are not returned to the hive;
- It is easy to construct and repair;
- It is cheap to construct;
- Queen excludes can be included to separate honey form the brood;

5 x 1 = 5 marks