KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

MOI GIRLS ELDORET

AGRICULTURE

PAPER 1

MARKING SCHEME

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MOI GIRLS ELDORET KCSE TRIAL AND PRACTICE EXAM 2016

AGRICULTURE

PAPER 1 / 443/1

MARKING SCHEME.

1. Four process of biological weathering.

(i) Burrowing animals e.g. termites and miles.

(ii) Big animals e.g. elephants, cattle exerts a lot of pressure on the rocks with their hooves.

(iii) Earthworms mix up organic matter with mineral particles.

(iv) Plant roots force their way into rock services.

(v) Plant remains decomposes to add humus to soil.

(vi) Mans activate like mining and quarrying expose rocks to surface wear.

(½ x 4 =2mrks)

2. (i) Production records.

(ii) Inventory records.

(iii) Field operation records.

(iv) Marketing records.

(v) Labour records. ***(½ x 4 =2mrks)***

3. (a) Mixed farming.

Practice of growing crops and keeping livestock in the same piece of land at the same time.

(1mrk)

(b) Disadvantages of mixed farming.

(i) Requires high level of management.

(ii) Labour intensive.

(iii) If not well confined , livestock can damage crops. ***(½ x3 = 1 ½ mrks)***

4. Three ways in which trees improve soil productivity.

(i) Conserve moisture.

(ii) Improves soil structure.

(iii) Control soil erosion.

(iv) Source of plant nutrients / organic matter some fix Nitrogen e.g. legumes.

(½ x 3 = 1 ½ mrks)

5. Four minimum tillage practices.

(i) Application of mulch which reduces the growth of weeds.

(ii) Use of herbicides to control weeds.

(iii) Uprooting weeds.

(iv) Planting cover crops.

(v) Timing cultivation of a given crop such that harvesting coincides with the planting of the next crop so as to find the field free of weeds.

(v) Restricting cultivation to the area where seeds are to be planted.

(½ x 4 =2mrks)

6. Two maintenance practice on water storage tanks.

(i) Repair / replace worn out parts.

(ii) Regular cleaning to remove dust.

(iii) Regular painting to prevent dust.

(½ x 4 = 4mrks.

7. Four examples of joint products in livestock production.

(i) Milk and butter.

(ii) Beef and hide.

(iv) Honey and wax.

(v) Wool and mutton.
(vi) Mutton and skin.
(vii) Pork / bacon and Bristles.

(½ x 4 = 2mrks)

8. Four examples of variable inputs.

(i) Casual labour.
(ii) Fertilizers.
(iii) Seeds
(iv) Fuel
(v) Pesticides

(½ x 4 = 2mrks)

9. Four effects of pests with both piercing and sucking mouth parts on crops.

(i) Suck plants sap causing wilting / stunted growth.
(ii) Some inject toxic saliva / secretions which may cause distorted growth / death of plants.
(iii) Lower quality of crop products.
(iv) Transmit / introduce diseases agents.
(v) Inflicts wounds / openings which provide entry for secondary infection.
(vi) Lowers crop yield.

(½ x 4 =2mkrs)

10. Two ways of breaking seed dormancy.

(i) Mechanical methods (scarification / filling / nicking.
(ii) Heat treatment (slight burning / charring / soaking in hot water.
(iii) Chemical treatment.
(iv) Soaking in water.

(½ x2=2mrks)

11. Three importance of tissue culture.

(i) Ensure pathogens free plants.
(ii) Used in man production of propagates / planting materials.
(iii) It is fast
(iv) It requires less space than the cultural methods.

(½ x 3 =1 ½ mrks)

12. Four financial documents kept on a farm.

(i) Receipt
(ii) Invoice
(iii) Statements
(iv) Purchase order.
(v) Delivery note**.**

(½ x4 =2mrks)

13. Four advantages of applying line as a measure of improving soil conditions.

(i) Improve soil structure by maintaining neutral and alkaline effects in the soil.
(ii) Supply calcium as plant food.
(iii) Ensure nutrients availability.
(iv) Increase population of soil micro- organism hence decomposition.

(½ x 4 =2mrks)

14. Four effects of mass wasting.

(i) Loss of soil fertility.
(ii) Creation of lakes.
(iii) Damaging property / loss of life.
(iv) Soil erosion.

(v) Permanent scars on land scape.
(vi) Tourist attraction.

(½ x 4= 2mrks)

15. (i) Capping.

Process of cutting the main item at the height of 53cm when the young coffee plant is 69cm tall. ***(1mrk)***

(ii) De – suckering.

Removal of suckers from a plant e.g. coffee, tobacco etc. ***(1mrk)***

(iii) Changing the cycle.

Replacement of old bearing items by suckers / new young stems after 4-6 years of growth. ***(1mrk)***

16. Three sources of organic matter in the soil.

(i) Organic mulch.
(ii) Crop residue / animal remains.
(iii) Green manure
(iv) Farm yard manure.
(v) Compost manure (filter press mud / scum) ***(½ x 3= 1 ½ mrks)***

SECTION B (20MRKS)

17. (a) (i) Trench silo(ry silo alone)***(1mrk)***
(ii) Silage ***1mrk***
(iii) Polythene sheet : to prevent entry of water into the silo. ***(1mrk)***

(b) Hay making
Standing forage.

(1x1=1mrk)

18. (a) Kshs. 6 ***(1mrk)***

(b) (i) The demand will be higher than supply hence creating a shortage in the market. ***(1mrk)***

(ii) The supply will be higher than demand hence creating a surplus which will force the prices to go down. ***(1mrk)***

(c) The government has to produce the surplus in the market which a mounts to 9 million kg of tomatoes.

(d) The government has to sell at kshs.4 which would be the demand the price is kshs 7 (subsidies offer. ***(1mrk)***

19. (a) Trellishing
(i) To produce clean fruits.
(ii) To control soil borne diseases.
(iii) To facilitate harvesting.
(1x2=2mrks)

(b) It is not advisable to use manure in carrot production because manure encourage forking / reduces the quality of carrot. **(1mrk)**

20. (a) Land fragmentation is a situation where a farmer has many small pieces of land scattered in different plants.

(b) (i) Buying .
(ii) Inheritance.
(iii) Gifts and donation**.** ***(1x3=3mrkss))***

(c) (i) To settle the landless.
(ii) To increase agricultural production
(iii) To create self reliance on the increasing population. ***(1x2=2mrks)***

SECTION C

21. (a) Cultural methods of weed control

(i) Correct spacing to deny weeds space for active growth but allowing faster crop establishment.

(ii) Mulching it smothers weeds.

(iii) Flooding used to control non- aquatic weeds.

(iv) Early planting gives crops ample time to establish early and smother weeds.

(v) Application of manure and fertilizers encourage faster plant growth.

(vi) Crop rotation: helps to break the life cycle of certain weeds associated with certain crops.

(vii) Clean seedbed: proper land preparation during the dry period,

Cover cropping : smothers weeds. ***(2x5=10mrks)***

(1mrk for stating)

(1mrk for explanation)

(b) Harmful effects of pests on crops.

(i) They damage the leaf tissue reducing the rate of photosynthesis. This results in retarded growth.

(ii) Some transmit pathogens from one crop to another.

(iii) Pests cause would in crops resulting in secondary infections.

iv) Some pests such as nematodes and Motts damage plants roots, causing wilting of plants.

(v) Some pests such as squirrels unearth some seeds resulting in low plant population.

(vi) Pests destroy buds and shoots which are the growing points of crops leading to stunted growth.

(vii) Sucking pests deprive the plant of its cell sap resulting in stunted growth.

(viii) Pests attack fruits berries, flowers and leaves thus lowering the quality and quantity of the produce.

(ix) Pests destroy seed embryo lowering their viability.

(xi) Some pests infect toxic substances which cause death to the plant tissue.

(x) Pests reduce the demand for a crop produce by lowering quality.

(2x5=10mrks)

22. (a) Dry Bean Production.

(i) Land preparation

- Prepare land during dry season; to kill all the weeds;
- Carry out secondary cultivation; to produce a medium tilth;***(1x4=4mrks)***

(ii) Planting:

- Plant at the beginning of the rains;
- Plants recommended varieties / suitable for the ecological conditions;
- Plants certified / healthy /well selected seeds;
- Plant at a spacing of 45 -60 cm by 15 – 23cm.
- Place 2-4 seeds per hole
- Plant as a depth of 2.5 – 5.0 cm;
- Apply phosphatic fertilizer; at a rate of 250kg /ha of SSP.

(1x6=6mrks)

(b) (i) Adopting modern methods of production e.g. use of tissue culture and embryo transplant.

(ii) Flexibility in production methods i.e. the enterprise should be designed to in such away

that their use can be changed without incurring extra costs.

(iii) Input rationing. This controls quantities of inputs allocated to different enterprise to minimize production carts

. (ix) Taking insurance cover guarantees compensation in case of theft or destruction of property in the farm.

(v) Selecting more reliable, enterprises i.e. the enterprise must have predictable outcome.

(vi) Diversification up several and different enterprises in order to spread the risks.

(2x5=10mrks)

23. (a) Safely precautions when using herbicides:

1. **-** One should wear protective clothing such as masks, gloves, overalls and boots;
2. - Avoid in haling the herbicides by not smoking while spraying / spray along the direction of the Wind;
3. - Read the manufacturer's instructions and follow them;
4. - Avoid sucking or blowing blocked nozzles;
5. - Immediately after handling chemicals the user must wash thoroughly to remove chemical traces;
6. - Herbicides should be stored in a safe place away from food and out of reach of children;
7. - Equipment used in herbicides application should not be washed in water sources used by humans and animals / to prevent pollutions.
8. - Empty containers and left-overs should be properly disclosed off in such a way that they will to pose danger to people , animals or the environment;
9. - Avoid herbicides drift to unintended crops / fields/ water sources / spray when the weather iscalm;
10. - Avoid chemical spillage in places that are unintended / where it may cause danger to human and animals.
11. - Equipment should be washed thoroughly to avoid damages to crops /animals in subsequent operations;
12. - Avoid eating or handling food before washing; ***First 10 –(10 x 1) mrks***

(b) Ten farming practices which help to conserve soil in a farm.

(i) Mulching to reduce the speed of run-off.
(ii) Controls farming by reducing the speed of run –off.
(iii) Terracing.
(iv) Afforestation/ Reafforestation / Tree planting.
(v) Establishing and maintain vegetated water ways to reduce speed of run –off.
(vi) Cover cropping.
(vii) Minimum tillage.
(viii) Contour ploughing.
(ix) Strip cropping.
(xi) Crop rotation.
(xii) Manuring / use of organic manures; ***(1x10= 10mrks)***