

**THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATIONS COUNCIL  
ADVANCED CERTIFICATE OF SECONDARY EDUCATION  
EXAMINATION**

**134/2**

**AGRICULTURE 2**

(For Both School and Private Candidates)

**Duration: 3 Hours**

**Year: 2025**

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**Instructions**

1. This paper consists of sections **ten (10)** questions
2. Answer **all** questions.
3. Each question carries **ten (10)** marks
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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Answer all questions. Each question Carries **ten (10)** marks.

1. Non-pathogenic plant diseases are not greatly taken into consideration when one talks of plant diseases.
  - (a) What do you understand by non-pathogenic plant diseases?
  - (b) Giving an example of a disease in each case, examine the following factors that cause non-pathogenic plant diseases in plants:
    - (i) Temperature fluctuation
    - (ii) Moisture fluctuation
    - (iii) Light fluctuation
    - (iv) Nutritional deficiencies
2. Occurrence of pathogenic disease in plants is explained by the concept of disease triangle. Elaborate this statement.
3. It has been the habit of most peasant farmers to control bird pests by scaring them through making noises. Suggest five other ways that can be used to get rid of the bird pests.
4. It has been noted that village farms are situated in an area which is highly infested with grass weeds, despite of the potential of the soil in producing high yield crops.
  - (a) How would you help the farmers in the village to identify the following weeds in the field?
    - (i) Couch grass
    - (ii) Star grass
    - (iii) Kikuyu grass
    - (iv) Sword grass
    - (v) Crows-foot grass
  - (b) Suggest two effective control measures of the weeds in (a).

5. The plant breeder was observed performing the following procedures for 8 years:
- First year: used unimproved old variety as a base population and grown in a large plant.
  - Second year: grew the crop from the bulk seed of selected plants in a separate field using standard variety as a check for comparison of performance.
  - Third to sixth year: evaluated the performance of bulk for yield and adaptation in main yield trials for 3 to 4 years using standard check for comparison.
  - Seventh and eighth year: released and named the variety in the seventh year and multiplied seeds in the eighth year for distribution.
- (a) What breeding method did the plant breeder perform?
- (b) Analyse five merits and four demerits of the breeding method performed by the plant breeder.
6. (a) During post-mortem of the dead cattle, soft flattened, leaf-like with a triangular head lobe organisms were found in the bile duct.
- (i) Identify the organisms found in the bile duct and state three effects that can be caused by that organisms.
- (ii) Give three measures that can be used to control the organisms found.
- (b) (i) Argue for or against the statement that “it is possible to eradicate East Coast Fever completely by controlling ticks.”
- (ii) Suggest three control measures of East Coast Fever.
7. (a) How would you differentiate digestion in the stomach of swine and sheep?
- (b) The school that keeps pigs, feeds the animals with stiff maize porridge and beans from students’ food remains.

- (i) Which nutrients are the animals basically being given?
  - (ii) Educate the piggery unit attendants in the school on the general classes of nutrients required by the animals?
8. (a) The school established alfalfa as pastures to feed the cattle.
- (i) What is the nutritional status of the pastures?
  - (ii) Advise the school on the proper composition of pastures to be established for farm animals. Give three reasons to support your answer.
- (b) Assume the school has established suitable pastures for the farm animals. Giving four reasons, suggest the best grazing methods to be employed in the pastures.
9. (a) A cow was seen facing difficulties during parturition due to excessive calf size. Briefly describe the assistance you would give to make the process successful. Give five points.
- (b) Analyse five disadvantages of not adopting artificial insemination in a piggery farm.
10. Land degradation is an environmental challenge in agricultural development that limits the sustainability of the sector. Prepare five management practices to maintain the quality of the soil as a means of combating the problem.