

071906T4AEN

Agricultural Engineering
Printed By: Technical And Vocational College Date: 21.11.2025 07:24
AM
ENG/OS/AGR/CR/02/6

Construct Farmstead Structures and Farm Roads

November/December 2025

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Date: 21.11.2025 07:24 AM



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TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

WRITTEN ASSESSMENT

Printed By: Technical And Vocational College Date: 21.11.2025
07:24 AM

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

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1. This paper consists of **TWO** sections: **A** and **B**. Date: 21.11.2025 07:24 AM
2. Answer **ALL** questions in section A and **ANY THREE** (3) questions in section B.
3. **Marks** ~~listion~~ are indicated in the brackets.
4. Candidates are provided with a separate answer book. Date: 21.11.2025 07:24 AM
5. Do not write on the question paper. Date: 21.11.2025 07:24 AM

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This paper consists of THREE (3) printed pages

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**Carefully check the question paper to ascertain that all pages are printed as
indicated and that no questions are missing.**

SECTION A: (40 MARKS)

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1. A cooperative society has bought 15 acres of land and intends to put up farm structures and a farmhouse. They seek advice on where to locate the farmstead. List FOUR considerations when choosing the site. (4 marks)

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2. A grain store foundation is being laid, and the supervisor insists on strong concrete.

- i. Define concrete.

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- ii. State THREE factors that affect the concrete quality. (3 marks)

3. A livestock farmer is hesitant to invest in farm structures. He asks you why they are necessary. State FOUR functions of farm structures. (4 marks)

4. The county hires a contractor to build a community cattle dip. Farmers are concerned about quality. List FOUR roles of the National Construction Authority (NCA). (4 marks)

5. A dairy farmer has lost calves due to poor housing. He wants advice on a good calf pen. State FOUR features of a good calf pen. (4 marks)

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6. Students in TVET college are tasked to construct a barbed wire fence around a demonstration plot. List FOUR tools suitable for fencing. (4 marks)

7. A new farmer wants to construct a dairy unit, but the extension officer advises surveying first. State FOUR reasons why farm surveying is necessary. (4 marks)

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8. A contractor rejects green timber for roofing, insisting it must be seasoned. List FOUR objectives of seasoning timber. (4 marks)

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9. A farmer plans to connect his tea farm to the main road. Identify FOUR factors to consider when planning a farm road. (4 marks)

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10. A tea estate manager is comparing different road types for transporting produce. Identify FOUR types of farm roads based on materials used for construction. (4 marks)

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07:24 AM

SECTION B (60 MARKS)

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Date: 21.11.2025 07:24 AM

11. A contractor insists on keeping daily construction reports for a new farm store.

- a. Outline SIX benefits of keeping daily reports. (6 marks)
- b. Explain SEVEN features of a construction report. (14 marks)

12. A farmer is undecided on the type of roof to use for different structures on the farm.

- a. Using sketches, explain SIX types of roof shapes. (12 marks)
- b. State EIGHT requirements of a good roof. (8 marks)

13. A farmer intends to establish a commercial poultry enterprise and seeks guidance on housing.

- a. State THREE systems of poultry housing. (3 marks)
- b. Outline FIVE considerations in poultry farm layout. (5 marks)
- c. Explain SIX design features of a poultry house. (12 marks)

14. You are contracted to design a 1.5 km road for transporting milk from a dairy unit to a

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- a. Describe FIVE layers of a farm road structure. (10 marks)

- b. Explain FIVE requirements of a good farm road. (10 marks)