

071906T4AEN

AGRICULTURAL ENGINEERING LEVEL 6**ENG/OS/AGR/CR/09/6****Agricultural Engineering Project November/December 2025**

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

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Time: 3 HOURS

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INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.

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2. Answer **ALL** questions in section A and **ANY THREE** (3) questions in section B.

3. Marks for each question are indicated in the brackets.

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4. Candidates are provided with a separate answer booklet

5. Do not write on the question paper.

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

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SECTION A (40 MARKS)*Attempt ALL questions in this section.*

1. You are the Project Manager for a factory you are required to launch a soil and water conservation project. Identify FOUR resources required for the project. (4 Marks)
2. An organization undertaking an agricultural engineering project hired a project manager. Outline FOUR duties that the project manager is expected to undertake. (4 Marks)
3. During a routine audit of a large-scale construction project, you discover a significant variance between the physical count of high-value copper wiring and the amount recorded as issued from the project's central store. Outline FOUR auditing of materials, tools and equipment in a project. (4 Marks)
4. A project manager for a construction project identifies a critical technical hurdle that will likely delay the completion of the project by one month. State FOUR importance of reporting anticipated project delays to relevant parties. (4 Marks)
5. During the planning phase of a complex engineering project, the team needs specific, validated information on the load-bearing properties of a new composite material to finalize their structural designs. Outline FOUR sources of technical information for project activities. (4 Marks)
6. The project team for a water supply system implementation is finalizing the system and preparing for handover to the water users. State FOUR training the project users during the project handover. (4 Marks)
7. A project sponsor is emphasizing on the critical importance of risk management at the start of the project. State FOUR reasons for risk management in a project. (4 Marks)
8. During the initiation of a large infrastructure project, the sponsor challenges the project manager's request to allocate resources for developing a detailed cost control mechanism. The sponsor argues that the approved budget is fixed and should be sufficient. State FOUR importance of a cost control mechanism in project budget management. (4 Marks)
9. A project manager is developing the detailed work plans and site safety policies for a major construction project in a remote location. Outline FOUR importance of planning of project logistics in preparation of work plans and policies. (4 Marks)
10. A project team has just completed a detailed document that outlines the project's scope, schedule, and budget. The team is now ready to begin the work of creating the project's deliverables. Identify FOUR stages of the project cycle. (4 Marks)

SECTION B (60 MARKS)**Attempt *ONE* and *ANY TWO* questions in this section**

11. You are a project manager of an irrigation solutions company. Your company has been awarded a project to revitalize an irrigation scheme. The project includes installing new irrigation systems, planting native trees and gardens, building new walking paths, and installing solar-powered lighting. The project charter has been signed, and the initial budget is set at Kshs 500,000, 000 with a deadline of two years.

- a) Explain the steps that will be followed in preparing the project plan. (10 Marks)
- b) Explain what is included within the scope of your project budget management responsibilities. (10 Marks)

12. A comprehensive project report is more than just a status update. It should provide a holistic view of the project's health and trajectory.

- a) Describe FIVE components that should be included in project progress report. (10 Marks)

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b) Explain FIVE reasons for sharing project progress report with the project team.

(10 Marks)

13. You are the project manager of a water supply project. You have just finished the planning phase and are about to begin the execution phase.

- a) Explain FIVE reasons for preparing a project monitoring plan. (10 Marks)
- b) Explain FIVE objectives of carrying out regular quality control inspection during project implementation. (10 Marks)

14. You are leading a project team comprising of 20 members from different departments.

- a) Explain FIVE objectives of team work in project management. (10 Marks)
- b) Explain FIVE reasons for delegating tasks to a team. (10 Marks)

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