

073206T4BLD

BUILDING TECHNICIAN LEVEL 6

CON/OS/BUT/CR/11/6

SUPERVISE A CONSTRUCTION PROJECT

July/August 2023



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

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections, A and B.
2. Answer all the questions in Section A and three Questions in Section B with one question being compulsory.
3. Marks for each question are indicated in brackets ().
4. You are provided with separate answer booklet
5. Do not write on the question paper

This paper consists of FIVE (5) printed pages.

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

SECTION A (40 MARKS)

Attempt all the questions in this section.

1. Define the term welfare as used in project labor. (2 Marks)
2. The wages of an employee as per the minimum wage act should be paid in full except for which situations. (4 Marks)
3. Carrying out recruitment is always costly to the organization. Highlight any **four costs** incurred in the recruitment process. (4 Marks)
4. Distinguish between duress and undue influence. (4 Marks)
5. Highlight the functions of a resident engineer during the contract period of a project implementation. (4 Marks)
6. Mention any **three** roles of KEBS in the construction industry. (3 Marks)
7. You are a project manager for a 12-storey building to be constructed as part of the affordable housing project. You will be required to maintain project's quality by ensuring that all tests on materials are done. State any **four** reasons for carrying out material testing during the entire period of the project. (4 Marks)
8. Outline any **four** methods used to secure a construction site. (4 Marks)
9. State **three** requirements of an employer in OSH Act. (3 Marks)
10. Maintenance of a constructed facility is a virtue, give any **four** reasons. (4 Marks)
11. Monthly progress reports are information given on site. Give any **four** pieces of information contained in a monthly progress report. (4 Marks)

SECTION B (60 MARKS)

In this section, attempt Question 12 and any other two questions.

12. A construction company has won a project that is aiming to create a modern and iconic landmark. The construction project involves a complex and challenging scope, including a 20-storey tower with multiple office floors, conference facilities, retail spaces, and advanced technological infrastructure. The project duration is set at 24 months, with a strict deadline to meet the client's business objectives and market demands. The construction company recognizes the critical importance of implementing rigorous quality control measures.
- a) Outline any four permitting processes involved in the structural and architectural plans approval. (4 Marks)
 - b) Mention guidelines that the construction company will adopt to ensure compliance with local building codes and safety standards in the project. (4 Marks)
 - c) Highlight guidelines in which the construction company will integrate quality control measures into the selection of subcontractors and suppliers. (4 Marks)
 - d) Outline steps that the construction company can take to ensure effective communication and collaboration among project teams and stakeholders regarding quality control? (4 Marks)
 - e) Identify ways in which the construction company can foster a culture of continuous improvement in quality control throughout the project. (4 Marks)
- 13.
- a. Given that the target cost of a project is Kshs.36 million and the increase/decrease percentage is 20%. If it costs Kshs.50 million on completion, calculate the fee paid. If on completion the costs total was Kshs. 30 million, calculate the fee paid using the target cost with fixed fee method. (10 Marks)
 - b. Explain five ways in which an offer may come to an end by revocation. (10 Marks)
14. A dam of 10 x 20 x 3m deep with a 200mm concrete base is to be constructed to provide a source of water for the community. For its construction, the following equipment and plant will be used; a bulldozer with an output of 30m³/hr. for site stripping, a bucket of 0.25m³, a 0.5m³ dumper, a wheelbarrow and a 40 NT concrete mixer. The foundation soil is to be casted away to the school farm 400m away.

- a. Highlight five ways of minimizing wastages of materials on site. (5 Marks)
- b. A plant and equipment schedule for the construction of the dam . (6 Marks)
- c. Prepare a method statement, plant and material schedule for the construction of the dam. (9 Marks)

15. The following trial balance was extracted from the books of Mutai a sole trader, on 30th August 2021.

	Ksh	Ksh
Capital		4,380,000
Building at cost	1,680,000	
Motor vehicles at cost	1,641,000	
Furniture and fillings at cost	372,000	
Inventory	1,488,000	
Purchases and sales	14,112,000	16,632,000
Receivables and parables	1,404,000	1,042,800
Discounts allowed and received	292,800	178,800
Return inwards and outwards.	24,000	43,200
Rent received		66,000
Loan		288,000
Prepaid rate 1 September 2021	7,200	
Investment income		225,000
Accrued electricity 1 September 2021		40,800
Irrecoverable debts	78,000	
Wages and salaries	1,690,800	
Drawings	384,000	
Electricity	207,600	
Bank balances	163,200	
Rate and insurance	72,000	
Provision for depreciation:		
Furniture and fittings		240,000
Motor vehicles		<u>480,000</u>
	<u>23,616,600</u>	<u>23,616,600</u>

Additional information:

1. Inventory as at 30 August 2021 was valued at Kshs. 2,040,000.
2. As at 30 August 2021 rates prepaid amounted to Kshs. 5,400.
3. Outstanding wages and salaries amounted to Kshs. 10,200 on 30 August 2021.
4. Depreciation on motor vehicles and furniture and fittings is to be provided at 10% and 5% respectively on reducing balance.
5. As at 30 August 2021 accrued electricity amounted to Kshs. 30,200.

Required:

- a) Statement of financial position as at 30 August 2021. (10 Marks)
- b) Income statement for the year ended 30 August 2021. (10 Marks)

easyvet.com