

2705/203

CONSTRUCTION MANAGEMENT I AND
WORKSHOP TECHNOLOGY II (ELECTRICAL)

June/July 2019

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN BUILDING TECHNOLOGY

CONSTRUCTION MANAGEMENT I AND WORKSHOP TECHNOLOGY II (ELECTRICAL)

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Scientific calculator;

Answer booklet.

This paper consists of EIGHT questions in TWO sections: A and B.

Answer FIVE questions choosing at least THREE questions from section A and TWO questions from section B.

All questions carry equal marks.

Maximum marks for each part of a question are as shown.

Answer all questions in the answer booklet provided.

Candidates should answer the questions in English.

This paper consists of 3 printed pages.

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

SECTION A: CONSTRUCTION MANAGEMENT I

Answer **THREE** questions from this section.

1. (a) State **four** types of contractors. (2 marks)
- (b) State **five** roles of each of the following stakeholders in construction industry:
- (i) Kenya Bureau of Standards;
- (ii) National Construction Authority. (10 marks)
- (c) Explain **three** types of construction work. (6 marks)
- (d) Explain the term management. (2 marks)
2. (a) State **eight** principles of management. (4 marks)
- (b) Explain **two** types of each of the following in an organization:
- (i) relationships;
- (ii) organizational structures. (8 marks)
- (c) Explain **four** functions of management. (8 marks)
3. (a) Explain **five** factors to consider when designing a site layout. (10 marks)
- (b) Explain **five** benefits of designing a site layout. (10 marks)
4. (a) State **four** roles of a Quantity Surveyor during the construction period. (4 marks)
- (b) Explain each of the following types of contracts stating **one** advantage in each case:
- (i) lump sum;
- (ii) cost plus fixed fee. (6 marks)
- (c) Distinguish open tendering from selective tendering. (4 marks)
- (d) Explain **three** types of contract documents. (6 marks)
5. (a) Outline **four** factors to consider when entering into a contract. (6 marks)
- (b) Explain **three** factors that make a contract null and void. (6 marks)
- (c) Explain **four** remedies for breach of contract. (8 marks)



SECTION B: WORKSHOP TECHNOLOGY (ELECTRICAL)

Answer **TWO** questions from this section.



6. (a) Explain each of the following lamps:
- (i) tungsten halogen lamp;
 - (ii) high-pressure sodium discharge lamp;
 - (iii) tubular fluorescent lamp;
 - (iv) mercury discharge lamp.
- (8 marks)
- (b) Explain each of the following electrical terminologies:
- (i) current;
 - (ii) cable;
 - (iii) insulator;
 - (iv) restivity.
- (8 marks)
- (c) Sketch each of the following electrical symbols:
- (i) cooker unit;
 - (ii) pull switch.
- (4 marks)
7. (a) Explain **two** classification of power distribution systems based on the scheme of connection. (4 marks)
- (b) State **four**:
- (i) advantages of wind power;
 - (ii) demerits of hydropower.
- (8 marks)
- (c) Sketch and label the distribution of electricity from generating station to consumer unit. (8 marks)
8. (a) State **six** IEE regulations relating to conductors. (6 marks)
- (b) Outline **four** factors to consider when costing for an electrical installation. (6 marks)
- (c) (i) Sketch and label a two-way switch with an intermediate switch to control a lamp in a long corridors.
- (ii) State **three** precautions observed when soldering aluminium cable joints. (8 marks)

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