

2705/203  
CONSTRUCTION MANAGEMENT I  
AND WORKSHOP TECHNOLOGY II  
Oct./Nov. 2018  
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL  
DIPLOMA IN BUILDING TECHNOLOGY  
MODULE II

CONSTRUCTION MANAGEMENT I AND WORKSHOP TECHNOLOGY II  
3 hours

**INSTRUCTIONS TO CANDIDATES**

*You should have the following for this examination:*

*Answer booklet;*

*Scientific calculator.*

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

*Answer 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 indicated.*

*Candidates should answer the questions in English.*

**This paper consists of 4 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 any **THREE** questions from this section.

1. (a) State **five** roles of each of the following stakeholders in the construction industry:
- (i) National Environment Management Authority;
  - (ii) Engineers Board of Kenya.
- (10 marks)
- (b) Explain each of the following types of contractors:
- (i) small;
  - (ii) medium;
  - (iii) large.
- (6 marks)
- (c) Distinguish civil engineering works from building works. (4 marks)
2. (a) Define each of following terms:
- (i) management;
  - (ii) motivation.
- (3 marks)
- (b) State **five** advantages of "line organization structure". (5 marks)
- (c) Explain **three** principles of organization. (6 marks)
- (d) Explain each of the following principles of management:
- (i) scalar chain;
  - (ii) equity;
  - (iii) centralization.
- (6 marks)
3. (a) (i) State **four** reasons for designing a site layout.
- (ii) Explain **four** advantages of site layout. (12 marks)
- (b) Explain **four** factors to consider when designing a site layout. (8 marks)



4. (a) State **four** duties of a quantity surveyor during construction. (4 marks)
- (b) Explain **four** types of contract. (8 marks)
- (c) Explain **four** factors that lead to cancellation of a contract. (8 marks)
5. (a) State **four** contract documents. (2 marks)
- (b) Explain **five** remedies to breach of contract. (10 marks)
- (c) Describe each of the following methods of tendering stating **two** advantages of each:
- (i) open;
- (ii) serial.
- (8 marks)

### SECTION B: WORKSHOP TECHNOLOGY II

*Answer any TWO questions from this section.*

6. (a) State **four** advantages of each of the following protective devices:
- (i) miniature circuit breakers;
- (ii) cartridge fuses.
- (8 marks)
- (b) Describe each of the following conventional drawings in electrical installation:
- (i) wiring diagrams;
- (ii) block diagrams;
- (iii) schematic diagrams.
- (6 marks)
- (c) Sketch the symbols used for each of the following devices in electrical drawings:
- (i) electrical bell;
- (ii) push button;
- (iii) intermediate switch.
- (6 marks)



7. (a) Sketch and label each of the following tools stating **one** use in each case:
- (i) flat nosed pliers;
  - (ii) adjustable hack saw. (8 marks)
- (b) Explain **three** parts of a domestic wiring cable giving **two** examples of materials used for each. (9 marks)
- (c) Outline **two** sources of electrical power. (3 marks)
8. (a) State **four** IEEE regulations relating to metal conduits. (4 marks)
- (b) Sketch **four** joints used in electrical wire connection. (8 marks)
- (c) **Figure 1** shows the electrical installation in a simple house. Estimate the cost of materials for electrical installation using the following data:

Cost of 2 way switch	Ksh 800 each
Socket outlets	Ksh 1500 each
Fluorescent lamp	Ksh 1000 each
Single pole one way switch	Ksh 400 each
Lamp	Ksh 200 each
Multiple socket outlet	Ksh 1000 each
Switched socket outlet	Ksh 1250 each
Cost of supplied cable needed	Ksh 12,500 each



(8 marks)

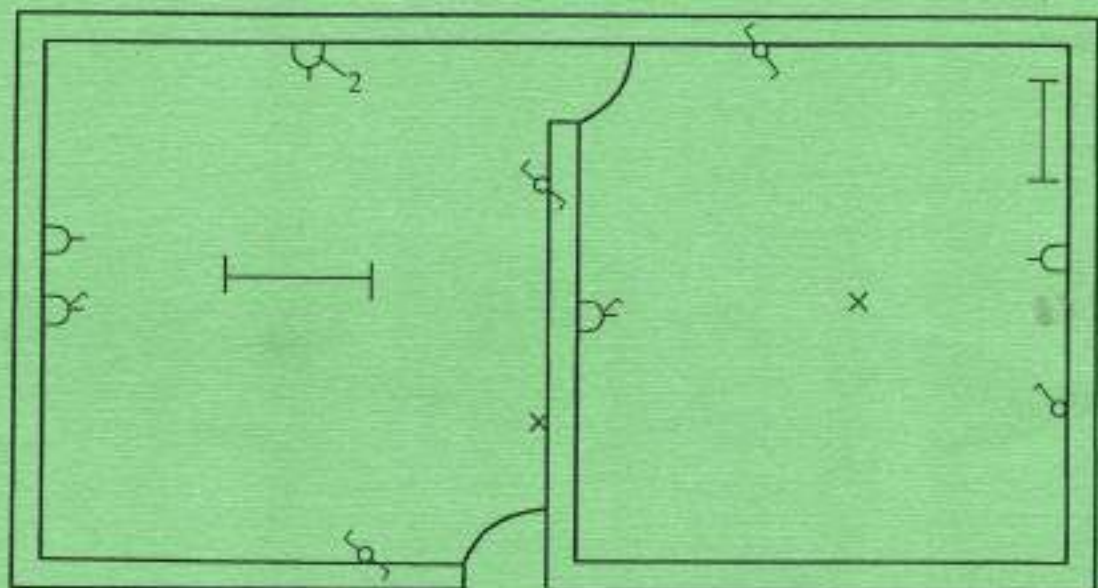


Fig. 1

THIS IS THE LAST PRINTED PAGE.