

1301/313
1304/313
1305/313
SITE AND WORKSHOP
MANAGEMENT
June/July 2020
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
CRAFT CERTIFICATE IN CARPENTRY AND JOINERY
CRAFT CERTIFICATE IN MASONRY
CRAFT CERTIFICATE IN PLUMBING

SITE AND WORKSHOP MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Scientific calculator.

Answer FIVE of the following EIGHT questions.

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.

1. (a) State **five** factors to consider when selecting a workshop site. (5 marks)
- (b) Explain **three** regulations governing establishment of a workshop. (9 marks)
- (c) Explain the following documents used in the process of ordering materials:
- (i) advice note; 8 13
- (ii) delivery note;
- (iii) invoice. (6 marks)
2. (a) List **two** sources of capital for purchase of equipment and tools for a workshop. (1 mark)
- (b) Differentiate between 'routine maintenance' and 'planned maintenance' of equipment. (4 marks)
- (c) State **eight** items to be considered in site investigation. (8 marks)
- (d) (i) With the aid of a table, explain a 'plant schedule'.
(ii) Explain the importance of 'method statement' in a project. (7 marks)
3. (a) List **four** contract documents. 8 (2 marks)
- (b) Explain the following types of contracts:
- (i) labour only contracts;
- (ii) cost reimbursement contracts;
- (iii) package deal. (6 marks)
- (c) Explain the following tendering methods: 12
- (i) open tendering;
- (ii) selective tendering. (6 marks)
- (d) State **three** roles of each of the following in the construction industry:
- (i) Quantity surveyor;
- (ii) Supplier. (6 marks)

4. (a) With aid of sketches, explain the following:
- (i) direct relationship;
 - (ii) lateral relationship;
 - (iii) functional relationship.

(9 marks)

(b) State **six** features of a good incentive at work place. (6 marks)

(c) State **five** factors to consider when carrying out discipline to workers. (5 marks)

5. (a) List **six** types of office equipment. (3 marks)

(b) (i) State **five** principles of filing documents.

(ii) Describe **three** ways of filing documents. (14 marks)

*calculating machines
staplers*

(c) State **three** forms of communication on site. (3 marks)

6. (a) Explain the purpose of an inventory on site. (2 marks)

(b) Explain how the following materials are stored on site:

- (i) timber;
- (ii) cement;
- (iii) aggregates; *
- (iv) small items.

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(8 marks)

(c) Define the term factory. (1 mark)

(d) Explain **two** ways of administering factories act. (9 marks)

7. (a) State **five** factors to consider when using construction plant. (5 marks)

- (b) (i) Sketch and label a 'face shovel'.
(ii) State where face shovel is suitably used.

(8 marks)

(c) (i) Explain the term 'matching of plant' giving one example.

- (ii) Using the data given below, calculate the number of 0.5 m^3 dumpers required to maintain a 0.5 m^3 non-tilting mixer at maximum efficiency if concrete is to be placed 200 m away.

Data

Mixer output - 6 m^3 per hour
 Travelling average speed - 15 km per hour
 Unloading time - 0.5 minute
 Manouvering time - 0.2 minute

(7 marks)

8. (a) State **five** characteristics of a good programme. (5 marks)
- (b) **Table 1** shows activities and duration required to carry out a project using a network programme. Determine the earliest and the latest event time and show the critical path. (15 marks)

Table 1

Activity	Duration
1 - 2	5
1 - 3	4
2 - 4	2
3 - 4	9
3 - 5	5
4 - 5	3

- (i) should be precise and clear
- (ii) Helps in keeping clear records & specification, and materials.
- (iii) Helps in minimizing losses.
- (iv) Helps in tracing records that might have been omitted or lost.
- (v) Gives guidelines on how work should be performed.
- (vi) inventories gives clear guidelines and records of the working programme.

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