

Name _____ Index No. _____ / _____

2707/303

Candidate's Signature _____

**BUILDING CONSTRUCTION III
AND TRANSPORT ENGINEERING II**

Date _____

Oct./Nov. 2014

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**DIPLOMA IN CIVIL ENGINEERING
MODULE III**

BUILDING CONSTRUCTION III AND TRANSPORT ENGINEERING II

3 hours**INSTRUCTIONS TO CANDIDATES***Write your name and index number in the spaces provided above.**Sign and write the date of examination in the spaces provided above.**You should have a calculator for this examination.**This paper consists of EIGHT questions in TWO sections: A and B.**Answer a total of FIVE questions as shown below in the spaces provided in this question paper:**any TWO questions from section A;**any TWO questions from section B;**any other ONE question from either section A or B.**All questions carry equal marks.**Candidates should answer the questions in English.***For Examiner's Use Only**

Section	Question	Maximum Score	Candidate's Score
A	1	20	
	2	20	
	3	20	
	4	20	
B	5	20	
	6	20	
	7	20	
	8	20	
TOTAL SCORE			

This paper consists of 20 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: BUILDING CONSTRUCTION III

Answer at least **TWO** questions from this section in the spaces provided.

1. (a) State any **six** functions of cladding on high rise buildings. (6 marks)
- (b) Sketch a section showing the details of a story height precast concrete cladding. (6 marks)
- (c) State **four** requirements of cladding joints. (4 marks)
- (d) Explain the term 'fire load'. (4 marks)
2. (a) Briefly describe the surface preparation of a concrete structure to receive plaster finish. (4 marks)
- (b) With the aid of a diagrams explain the construction of the following:
 - (i) timber skirting;
 - (ii) terazzo skirting;
 - (iii) tile skirting

(9 marks)
- (c) List any **four** functions of internal plaster. (2 marks)
- (d) Briefly describe how plastering is applied on wall surfaces. (5 marks)
3. (a) Differentiate between pointing and jointing of brickwork. (2 marks)
- (b) Sketch the following joint finishes:
 - (i) key;
 - (ii) weather struck;
 - (iii) flush;
 - (iv) tuck joint.

(2 marks)
- (c) State **six** factors to be considered when selecting floor finishes. (6 marks)
- (d) Outline the Terazzo laying procedure. (10 marks)
4. (a) State any **six** reasons for using suspended ceilings as a building finish. (6 marks)
- (b) Sketch a section through a suspended ceiling along a perimeter wall showing the details at the support. (4 marks)
- (c) Briefly describe the functional requirement of a window. (3 marks)

- (d) (i) With the aid of a sketch describe a panelled door.
- (ii) List any **four** door furniture required for timber doors.
- (7 marks)

SECTION B: TRANSPORT ENGINEERING II

Answer at least TWO questions from this section in the spaces provided.

5. (a) (i) State **four** factors that affect dredging works. (4 marks)
- (ii) With aid of sketches, briefly describe the following dredging plants:
- I - bucket dredger;
- II - trailing suction dredger.
- (5 marks)
- (b) Sketch and label a vertical section across two adjacent Raillines on an Embankment. (3 marks)
- (c) State:
- (i) **Five** functions of subgrade material in rail lines;
- (ii) **Three** methods in which surface water is controlled in a railline. (8 marks)
6. (a) (i) Briefly describe **four** functions of a prime coat as used in paved roads. (7 marks)
- (ii) With aid of a sketch briefly describe a single surface dressing method. (7 marks)
- (b) Describe the laboratory procedure for C.B.R. test. (7 marks)
- (c) (i) State the major objective of geometric design in roads.
- (ii) List **six** elements considered in the geometric design of roads. (6 marks)
7. (a) Briefly describe the manual maintenance method of spot regravelling of a pothole within unpaved road. (5 marks)

