



**MURANG'A UNIVERSITY COLLEGE (MRUC)**

**(A constituent college of Jomo Kenyatta University of Agriculture & Technology)**

**School of Engineering and technology**

**Building and civil engineering**

**Certificate in masonry**

**Class :** BC/m /13c  
**Subject :** masonry theory  
**CODE:** SEB 0203  
**Time :** 2 1/2 HOURS

**April 2015**

**INSTRUCTIONS**

Answer all the **FIVE** given questions

All questions carry equal marks

Marks for each question are allocated at the end of each

1 a, explain each of the following terms .

- i. Backfill
- ii. Bearing capacity
- iii. Settlement (6marks)

b, Outline four characteristics of a floor screed. (4marks)

C, Sketch and label a cross section through a raft foundation and show minimum dimensions. (10marks)

2 a, List four functional requirements of a formwork. (4marks)

b, Outline three advantages of steel formwork over timber formwork. (6marks)

C, Explain how you can alleviate the following defects on hardened concrete.

- i. Blow holes

- ii. Uneven color (4marks)
- d, State six advantages of pre-cast concrete slabs. (6marks)
- 3 a, Outline five principles of a good drainage system. (5marks)
- b, Use a line diagram to show the layout of the three drainage systems. (15marks)
- 4 a, State four characteristics of a good paint. (2marks)
- b, Outline four ways of increasing the load bearing capacity of friction pile. (4marks)
- C, With an aid of a diagram show the procedure of casting an in situ concrete pile. (6marks)
- d i State four requirements of formwork. (4marks)
- ii Outline four factors that will determine the strength of the hardened concrete. (4marks)
- 5 a, Figure 1 shows a chimney stack projecting through the slope of a roof covered with plain clay tiles.
- Sketch a labeled section to show the construction details between the chimney stack and the roof. (4marks)
- b With an aid of a sketch outline the building code of regulation as regards the chimney termination above the roof. (6marks)

Fig i

b Figure ii shows a timber stair of a common stairway.

Copy and indicate five building regulation requirements (10 marks)

Fig ii