



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations for 2015/2016

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN BUILDING
CONSTRUCTION TECHNOLOGY

BCEBT 108: BUILDING TECHNOLOGY 1

Date: 3/12/2015

Time: 8:30 – 10:30 AM

INSTRUCTIONS:

- This paper comprises of FIVE questions
- Question ONE is compulsory and carries 30 marks
- Answer any other two questions

1.

a)

(i) Define the following terms

- Masonry
- Building (4 marks)

(ii) Briefly explain the roles of each of the following parties in a construction site

- Architect
- Quantity surveyor
- Contractor
- General foreman (8 marks)

(iii) Identify five activities that may be involved in site clearance (10 marks)

(iv) With the aid of neat sketches illustrate any four methods of providing barriers to excavations. (8 marks)

2.

- a)
- (i) Define the term foundation. (2 marks)
 - (ii) With the aid of neat labeled sketches illustrate the following types of foundations
 - Deep strip foundation
 - A solid raft foundation (8 marks)
- b)
- (i) State four factors that determine the methods of excavation. (4 marks)
 - (ii) Briefly describe three methods of setting out. (6 marks)

3.

- a)
- (i) State three factors considered in the choice of foundation type. (3 marks)
 - (ii) Outline four conditions which dictate the use of manual excavation method. (4 marks)
- b)
- (i) With the aid of a neat labeled sectional sketch, illustrate the details of a solid ground floor. (10 marks)
 - (ii) Identify three methods of transferring levels. (3 marks)

4.

- a)
- (i) Explain the importance of bonding walls. (2 marks)
 - (ii) State five functional requirements of a foundation. (5 marks)
 - (iii) Differentiate between deep and shallow excavations. (4 marks)
- b)
- (i) With the aid of neat labeled sketch illustrate timbering in dry loose soil for shallow foundations. (6 marks)
 - (ii) Name three types of bonds used in brick work. (3 marks)

5.

- a)
- (i) Define the term timbering. (2 marks)
 - (ii) With the aid of neat sketches , illustrate three methods of reducing levels on a sloping site. (6 marks)
- b)
- (i) Define the term mortar. (2 marks)
 - (ii) Identify any six properties of an ideal mortar. (6 marks)
 - (iii) Explain two methods of batching aggregates. (4 marks)