



Machakos University College

(A Constituent College of Kenyatta University)

University Examinations 2013/2014

SCHOOL OF ENGINEERING

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

Diploma in Building and Civil Engineering Year 2

Measurement of Building and Civil Engineering & Estimating
and Costing 1

Date: 28/3/2014

Time: 3 Hours

Instructions to Candidates

- (i) You should have the following for this examination:-
 - Answer booklet
 - Scientific calculator
 - Dimension papers
 - A copy of the standard method of measurement for building and Civil Engineering Works.
- (ii) Attempt four questions, choosing two questions from each section
- (iii) Maximum marks for each part of a question are as shown.

SECTION A: MEASUREMENT

1. Using standard dimension papers, take off all quantities for substructures shown on drawing number 01 up to and including DPC. (30 marks)
2. (a) Define the following terms as used in quantity surveying :
 - (i) Standard method of measurements – S mm
 - (ii) Bills of quantities (10 marks)
- (b) Outline the four main roles of a quantity surveyor covering the cycle of a project. (10 marks)
- (c) Outline the main uses of bills of quantities to the project quantity surveyor during the construction of a building. (10 marks)
3. (a) Outline the following process in the traditional methods of bill preparation:
 - (i) Taking off

- (ii) Working up
- (b) Briefly describe 3 types of bills of quantities. (15 marks)

SECTION B: ESTIMATING – ANSWER ANY TWO QUESTIONS

- 4. (a) Outline the roles of quantity surveyor in the following stages.
 - (i) Pre-contract stage
 - (ii) Construction stage
 - (iii) Post construction stage (9 marks)
- (b) Briefly explain each of the following
 - (i) Prime cost sum
 - (ii) Provisional sums
 - (iii) Contingency sum (6 marks)
- (c) State five sources of cost information (5 marks)
- 5. (a) Explain the following as used in Building and Civil Engineering contracts.
 - (i) Interim Certificates
 - (ii) Final payment certificates (8 marks)
- (b) State seven contract documents. (7 marks)
- (c) Define the following terms
 - (i) Tender
 - (ii) Variation
 - (iii) Contract (5 marks)
- 6. (a) Describe the following types of contracts.
 - (i) Contract with bill of quantities
 - (ii) Lump sum contract
 - (iii) Cost plus fixed fee contract (12 marks)
- (b) State five types of tenders. (5 marks)
- (c) Outline the roles of estimator. (3 marks)