



JARAMOGI OGINGA ODONGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS FOR THE DIPLOMA IN BUILDING AND CIVIL
ENGINEERING**

3RD YEAR 1ST SEMESTER 2018/2019 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

COURSE CODE: TBC 2313

COURSE TITLE: ESTIMATION AND COSTING IN CONSTRUCTION

EXAM VENUE: STREAM: DIP BLD & CIVEN

DATE: ../12/2018 EXAM SESSION:

DURATION: 2 HOURS

Instructions

- 1. Answer question 1 (Compulsory) and ANY other two questions**
- 2. Candidates are advised not to write on question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

SECTION A

Compulsory Question.

Question 1

Take off all quantities of the substructure works in drawing 01 upto and including dpc. (use SMM) (30 Marks)

SECTION B

Answer any two questions from this section.

Question 2

- a) Define the term measurement as used in quantity survey. (2 marks)
- b) Explain the following terms as used in measurements:
 - i. Extra over items;
 - ii. Deemed to be included items;
 - iii. Provisional sum;
 - iv. Variations;
 - v. Penultimate certificate. (10 marks)
- c) State **five** functions of Bill of Quantities. (5 marks)
- d) Give **three** types of contract documents used in quantity surveying. (3 marks)

Question 3

- a) List any **four** sources of cost information. (2 marks)
- b) Explain:
- i. Competitive tendering;
 - ii. Open tendering;
 - iii. Selective tendering. (7 marks)
- c) State **three** duties of contractor's estimator. (3 marks)
- d) Determine the cost of an office floor whose external dimensions are 36 m x 24 m with five floors comprising of one basement with a height of 4 metres and four other floors of storey height 3 metres. Given that the storey enclosure cost per m² is Ksh 32,000 and the thickness of the basement wall is 250 mm while that for upper floors is 200 mm. (8 marks)

Question 4

- a) Explain four methods of valuing variations to contracts. (8 marks)
- b) Using hypothetical examples, explain the following concepts of measurement:
- i. grouping of dimensions;
 - ii. dotting on;
 - iii. timesing;
 - iv. order of dimensions. (12 marks)

Question 5

- a) Highlight three roles of the quantity surveyor at each of the following stages:
- (i) Pre-contract;
 - (ii) Construction;
 - (iii) Post construction. (9 marks)
- b) Explain four categories of wastage in materials. (8 marks)
- c) Differentiating net pricing from gross pricing. (3 marks)