



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF ENGINEERING AND TECHNOLOGY
UNIVERSITY EXAMINATIONS FOR THE DIPLOMA IN CIVIL ENGINEERING
(TVET)
1ST YEAR 2ND SEMESTER 2023/2024 ACADEMIC YEAR
CENTRE: MAIN CAMPUS

COURSE CODE: TDE 2126

COURSE TITLE: MEASUREMENT OF WORKS AND COST ESTIMATION

EXAM VENUE: STREAM: Dip CIVIL ENGINEERING

DATE: ../04/2024 EXAM SESSION:

DURATION: 3 HOURS

Instructions

- 1. Answer ALL questions in Section A (Compulsory) and ANY other three questions in Section B**
- 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) (40 MARKS)

Answer all the given questions in this section.

Question 1

- a) Define the term measurement as used in quantity survey. (2 Marks)
- b) **Figure 1** shows a dimension paper. Explain the purpose of each of the columns. (8 Marks)

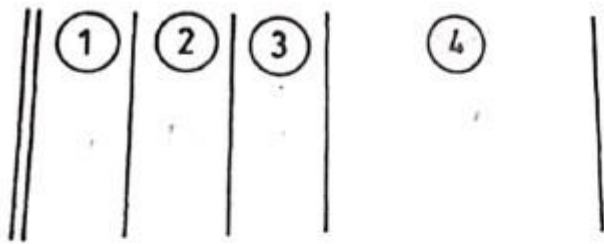
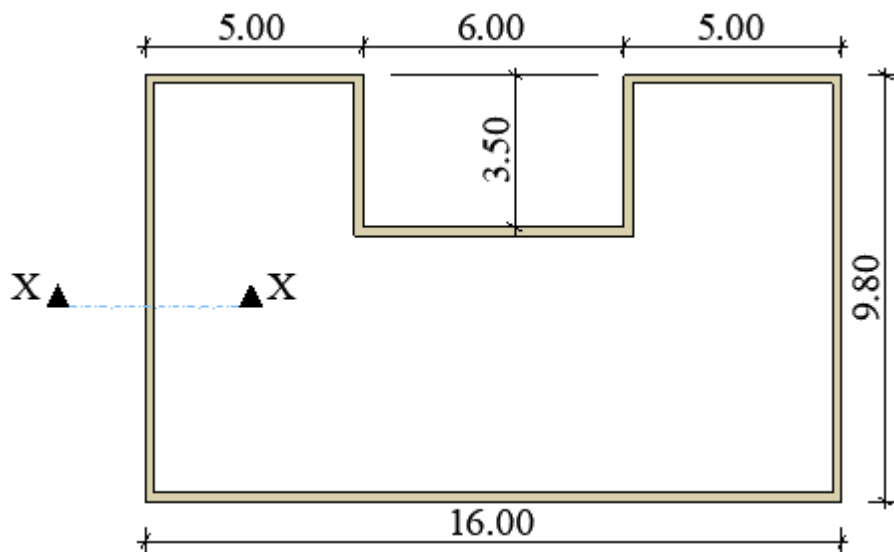


Fig.1

- c) Take off all quantities of the substructure works in **Figure 2** upto and including dpc. (use SMM) (30 Marks)



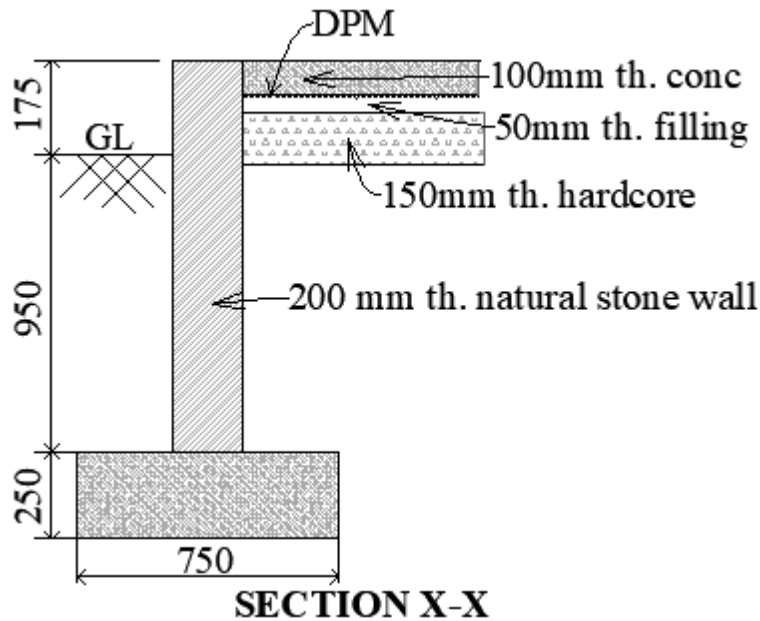


Figure 2

SECTION B (40 MARKS)

(Answer any TWO questions in this section)

Question 2

- a) Explain the following terms as used in measurements:
 - i. Extra over items;
 - ii. Deemed to be included items;
 - iii. Prime cost items;
 - iv. Preambles. (10 Marks)
- b) State **five** functions of Bill of Quantities. (5 Marks)
- c) Give **three** types of contracts used in quantity surveying. (3 Marks)
- d) Explain the purpose of approximate estimate. (2 Marks)

Question 3

- a) Define the term 'variation'. (2 Marks)
- a) Explain the significance of the following in the Bills of Quantities:
 - i. Provisional sums;
 - ii. Contingency sums. (6 Marks)

- b) State any **six** roles of the Quantity Surveyor at the inception stage of a project. (6 Marks)
- c) Explain the following approximate estimating methods;
- i. Functional unit method;
 - ii. Superficial area method. (6 Marks)

Question 4

- a) List any **four** sources of cost information. (2 Marks)
- b) Explain:
- i. Competitive tendering;
 - ii. Open tendering;
 - iii. Selective tendering. (9 Marks)
- c) State **three** duties of contractor's estimator. (3 Marks)
- d) Explain the role of each of the following parties in the construction industry;
- i. client;
 - ii. architect;
 - iii. contractor. (6 Marks)