



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF SCIENCE AND
TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

FOURTH YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF TECHNOLOGY EDUCATION (CIVIL &
BUILDING CONSTRUCTION OPTION)**

**COURSE CODE: TEB 464
COURSE TITLE: QUANTITY SURVEYING II**

DATE: 20TH APRIL 2022 TIME: 2 – 5 P.M

INSTRUCTIONS:

1. This paper contains **FOUR** questions
2. **Question ONE (1) is Compulsory**
3. **Attempt a total of THREE questions in this booklet.**
4. Marks for each question are indicated in the parenthesis.

Examination duration is **2 Hours**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

QUESTION ONE

- a) Explain how the SMM of Building works is organized giving examples of at least two sections of works. (4marks)
- b) Write the following abbreviations in full and give their meaning.
- i) a.b.d (1mark)
 - ii) av. (1mark)
 - iii) Ddt (1mark)
 - iv) n.e (1mark)
- c) Explain giving the illustrations when the following terminologies are used in the taking-off exercise.
- i) Timesing again (1½marks)
 - ii) Dotting on (1½marks)
 - iii) Ampersand sign (&) (2marks)
 - iv) Timesing and dotting on (2marks)
- d) **Figure (Q.1d)** shows the Plan, Section and Elevations of a single room with veranda. Take off complete quantities of the sub structure of the single room with veranda. (25marks)

QUESTION TWO

- i) Define the term Variations. Explain how variation orders are generated. (5marks)
- ii) Explain how the variations are valued (4marks)
- iii) The Education complex workshop was constructed in the 2020 at the cost of ksh.80 million. Find out the depreciation value of the complex after 20 years. The life span of the complex is considered as 100 years. The rate of the bank interest is 6% (compound interest). The scrap value is taken as 10% of the capital cost by use of constant percentage method. (6marks)

QUESTION THREE

Figure Q3 shows details of a Reinforced concrete beam. Use the details given below to give quantities of reinforcement bars in terms of both enumerated number of pieces and Weight. (15marks)

Reinforcement bars.

Size (mm)	6	8	10	12	14	16	18	20	25	32	40	50
Area (mm²)	28.3	50.3	78.5	113.0	153.96	201.0	254.0	314.0	491.0	804.0	1257.0	1963.0
Weight (kg per m)	0.222	0.395	0.617	0.888	1.209	1.58	2.00	2.47	3.85	6.31	9.86	15.41

QUESTION FOUR

- a) Outline the factors which influence the valuation of a property (3marks)
- b) Define the following terms as applied in valuation: (3marks)
 - i) Outgoings
 - ii) Gross income
 - iii) Net income
- c) A generator has to be installed at the cost of ksh.12.5 million. Work out the amount of annual installment of the sinking fund to be deposited to accumulate the amount of 12.5 million. Assume the lifespan of the generator is 20 years. The rate of interest is 10%-compound interest. (9marks)

TEB 464: 22/23

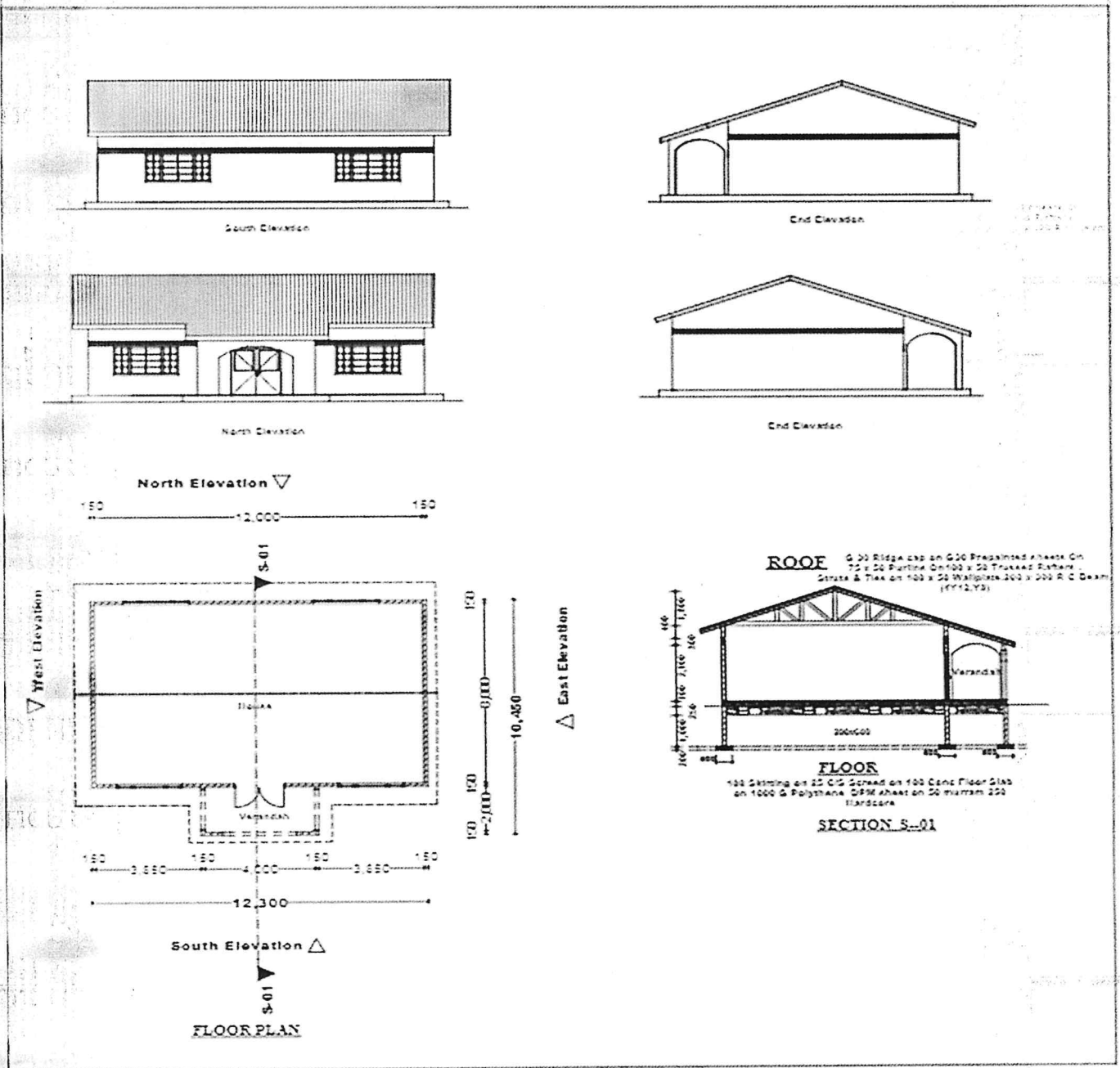


FIGURE Q2: SINGLE ROOM WITH VERRANDA, PLAN, SECTION AND ELEVATIONS

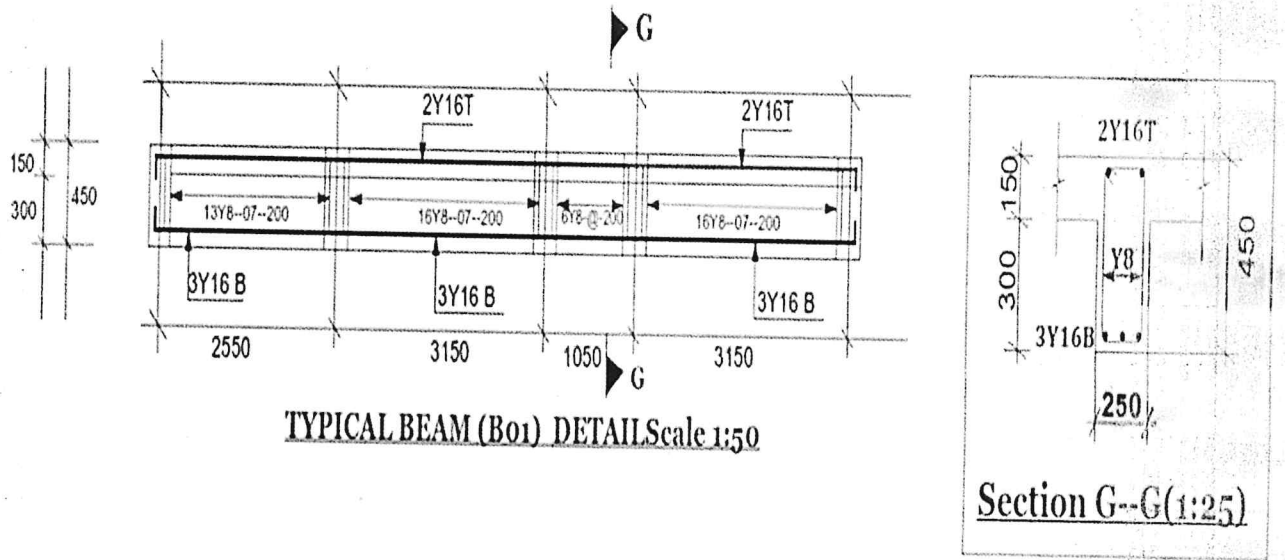


FIGURE Q3: TYPICAL BEAM DETAILS AND SECTION

-END-

