



(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

SECOND YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF TECHNOLOGY EDUCATION
IN
CIVIL ENGINEERING**

COURSE CODE: TEC 213

COURSE TITLE: WORKSHOP TECHNOLOGY

DATE: THURSDAY 28TH APRIL 2022 TIME: 8.00 – 10.00 AM

INSTRUCTIONS:

1. This paper contains FIVE Questions
2. Attempt Question ONE and any other three questions
3. Marks for each question are indicated in the parenthesis.
4. It is in the best interest of the student to write legibly
5. Examination duration is **2 Hours**

MMUST observes ZERO tolerance to examination cheating
This Paper Consists of 2 Printed Pages. Please Turn Over.

- 1 a). i). Make a proportional diagram of a mechanical lathe machine (10 mks)
 ii). Use arrow lines to name any ten parts of the machine. (5 mks)
- b). i). Make a proportional drawing of a drilling machine. (10 mks)
 ii). Use arrow lines to name any ten parts of the machine (5 mks)
2. i). Make a neat proportional diagram of a drill bit. (4 mks)
 ii). Name any three parts and state their functions. (3 mks)
 iii). Explain the following terms as used in metal joining: (3 mks)
 i). Soldering ii). Tinning iii) Flux
3. i). Use a neat well proportional labeled diagram of an anvil. (4 mks)
 ii). Use arrow lines on the drawing to name any three parts. (3 mks)
 iii). Explain the following terms as used in metal joining: (3 mks)
 i). Brazing ii). Spelter metal iii). Joint
4. Use clearly labeled diagrams to illustrate the following forge work processes.
- i). Upsetting (4 mks)
 ii). Drawing down (4 mks)
 iii). Explain the following terms as used in metal joining: (2 mks)
 i). Butt joint v). Lapped Joint