



## MERU UNIVERSITY COLLEGE OF SCIENCE & TECHNOLOGY

P.O. Box 972-60200 Meru - Kenya. Tel: 020-2092048, 020 2069349  
Fax: 020-8027449

---

### University Examinations 2010/2011

FIRST YEAR, FIRST SEMESTER EXAMINATIONS FOR DIPLOMA IN AGRICULTURAL EDUCATION  
AND EXTENSION/DIPLOMA IN AGRICULTURE/CERTIFICATE IN AGRICULTURE

TEC 0150: WORKSHOP TECHNOLOGY AND PRACTICE

DATE: AUGUST 2010

TIME: 1½ HOURS

---

INSTRUCTIONS: *Answer All Questions in Section A and any Two from Section b*

---

#### SECTION A

##### QUESTION ONE – (30 MARKS)

- (a) What is meant by the term marking-out? (2Marks)
- (b) Name FOUR Safety hazards in a workshop. (4Marks)
- (c) What is meant by the following terms?
- i. Ferrous metals
  - ii. Non-ferrous metals (4Marks)
- (d) Using sketches draw and label three types of hammers (6Marks)
- (e) Draw and label the parts of a micrometer screw gauge. (6Marks)
- (f) Using a sketch, briefly explain how to read vernier calipers. (6Marks)
- (g) Name four types of hand files (2Marks)

#### SECTION B

*(Attempt Any TWO questions from this Section)*

##### QUESTION TWO – (15 MARKS)

- (a) Draw and label FOUR marking-out tools used in the workshop (6Marks)

- (b) Name two types of grinding machines (2Marks)  
(c) Explain how to prepare a grinding machine for cutting. (2Marks)  
(d) Given a Metal bar, Explain how to perform drilling work (5Marks)

**QUESTION THREE – (15 MARKS)**

- (a) Draw and label TWO finishing tools used in the workshop. (4Marks)  
(b) Explain painting as a finishing process. (4Marks)  
(c) Explain the procedure of performing gas welding. (7Marks)

**QUESTION FOUR – (15 MARKS)**

- (a) What is meant by the following terms?  
i. Oxy-acetylene welding  
ii. Arc welding  
iii. Soldering (3Marks)
- (b) Draw and label the parts of a hand drilling machine (7Marks)  
(d) Draw and label a twist drill bit (5Marks)

**QUESTION FIVE – (15 MARKS)**

- (a) Using a sketch explain the riveting process. (6Marks)  
(b) Draw and label the parts of a bench vice (4Marks)  
(c) Draw three types of spanners (5Marks)