

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
SCIENCE IN AGRICULTURAL EDUCATION.

AGEN 112: INTRODUCTIONS TO WORKSHOP TECHNOLOGY

STREAMS: AGEN Y1S1

TIME: 2 HOURS

DAY/DATE: THURSDAY 8/08/2019

2.30 P.M - 4.30 P.M.

INSTRUCTIONS:

- Answer ALL Questions in Section I and TWO Questions in Section 2
- Do not write anything on the Question paper

SECTION I

1. Explain four characteristics that measuring instruments should possess. [4 Marks]
2. (a) With the aid of examples, describe what is meant by unsafe working condition. [5 Marks]
(b) Briefly explain systematically five safe ways to work. [10 Marks]
3. Explain ten personal safety requirements in a workshop. [5 Marks]
4. (a) Define welding. [3 Marks]
(b) Draw a micrometer calliper and indicate a reading of (9.98 mm.) [4 Marks]

SECTION II

5. (a) Describe what you understand by a workshop. [2 Marks]
(b) Briefly explain the following forging operations;
(i) Upsetting [2 Marks]
(ii) Draw down [2 Marks]
- (c) Briefly explain the following methods of making joints;
(i) Soldering [8 Marks]
(ii) Brazing [6 Marks]

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6. (a) Explain forging. [3 Marks]
- (b) By use of diagrams, describe the three types of flames used in gas welding and explain their field of application. [12 Marks]
- (c) Explain five variables that can influence weldability. [5 Marks]
7. Identify three tools that are used in a metal sheet workshop and by use of diagrams explain how each one of them is applied. [5 Marks]
- (b) (i) Sketch, in good proportion, a vernier caliper and name the parts. [5 Marks]
- (ii) Explain safety rules for welding process. [4 Marks]
- (c) Draw and name different parts of oxygen and Acetylene gas cylinders system. [6 Marks]
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