

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2016/2017**

SECOND YEAR, FIRST SEMESTER EXAMINATION FOR THE DIPLOMA IN CIVIL ENGINEERING

**ECV 2203: ENGINEERING MATERIALS**

**DATE: DECEMBER, 2016 TIME: 11/2 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. List and define any three properties of building materials. (6 Marks)
2. Describe the applications of ferrous metals as building materials. (5 Marks)
3. State five benefits of heat treatment of steel. (5 Marks)
4. List five characteristics of good timber. (5 Marks)
5. State three constituents of good brick making soil. (3 Marks)
6. State three applications of plastics in building construction. (3 Marks)
7. List three applications of stones as a building material. (3 Marks)

**QUESTION TWO (15 MARKS)**

1. Discuss three characteristics of good building stones. (6 Marks)
2. Describe three characteristics of good brick. (6 Marks)
3. Name any three alloying elements used in steel making. (3 Marks)

**QUESTON THREE (15 MARKS)**

1. Discuss four defects that may occur in painting work. (8 Marks)
2. Giving examples explain the uses of non ferrous metals as building material (7 Marks)

**QUESTION FOUR (15 MARKS)**

1. Discuss five desirable properties of roofing tiles. (10 Marks)
2. Briefly explain the need for stone dressing after quarrying. (5 Marks)