



**MERU UNIVERSITY COLLEGE
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University Examinations 2010/2011

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

TEC 0151: FARM POWER, TRACTOR SERVICING AND OPERATIONS

DATE: APRIL 2011

TIME: 1½ HOURS

INSTRUCTIONS: *Answer Question one and any other two questions*

QUESTION ONE – (30 MARKS)

- (a) Discuss three disadvantages of relying on human labour as the major source of farm power. (6 Marks)
- (b) Farm tractors can be grouped into three types based on their powered wheels. State and distinguish the three types. (6 Marks)
- (c) Describe three components of the cooling system of the engine of tractor. (6 Marks)
- (d) Mention three possible reasons which may cause the tractor gear to clash when shifting from one gear to the other and state briefly how each cause can be corrected. (6 Marks)
- (e) Compare and contrast drum brakes and disk brakes. (6 Marks)

QUESTION TWO – (15 MARKS)

List and explain briefly five points to inspect regularly to void brake failure. (15 Marks)

QUESTION THREE – (15 MARKS)

Describe the four cycles of a four-stroke diesel engine. (15 Marks)

QUESTION FOUR – (15 MARKS)

Describe five major activities required when servicing a tractor. (15 Marks)