



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

UNIVERSITY ORDINARY EXAMINATION

2021/2022 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN CIVIL
ENGINEERING**

SEB1355– SURVEY V

DURATION: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

1. Answer question One and Any Other Two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

QUESTION ONE (30 MARKS)

- a) Define the following terms.
- i. Curves
 - ii. Photogrammetry
 - iii. Mid-ordinate
 - iv. External Distance (8 mks)
- b) Using a well-illustrated sketch, describe a vertical curve. (3 mks)
- c) Differentiate between horizontal curves and vertical curves. (4 mks)
- d) Highlight the elements of vertical curves. (5 mks)
- e) State four requirements of transmission curve. (4 mks)
- f) Explain the following type of oblique photographs. (4 mks)
- i. High oblique
 - ii. Low oblique
 - iii. Frime trogon oblique. (6 mks)

QUESTION TWO (20 MARKS)

- a) Using well-illustrated sketches, describe methods of setting out simple circular curve. (10mks)
- b) Discuss the elements of horizontal curves. (10 mks)

QUESTION THREE (20 MARKS)

- a) Define the following types of metric photogrammetry.
- i. Aerial Photogrammetry
 - ii. Terrestrial Photogrammetry (4 mks)
- b) Explain the classifications of photographs. (6 mks)
- c) Discuss various application area of Photogrammetry (10 mks)

QUESTION FOUR (20 MARKS)

- a) Highlight the importance of transition curve. (4 mks)
- b) A circular curve has 300 m radius and 600 deflection angle. Find its degree by.
- i. Arch definition
 - ii. Chord definition of standard length 30 m. (4 mks)
- c) Using question four part(b0 above calculate
- i. Length of curve
 - ii. Tangent length
 - iii. Length of Long Chord
 - iv. Mid-coordinate (12 mks)