

20



(University of Choice)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

(Main Campus)

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

MAIN EXAMINATION

THIRD YEAR FIRST SEMESTER EXAMINATIONS

FOR THE DEGREE OF

BACHELOR OF SCIENCE IN DISASTER PREPAREDNESS & ENVIRONMENTAL
TECHNOLOGY

COURSE CODE: DPE 300

COURSE TITLE: PRINCIPLES OF SURVEYING

DATE: 13/12/2023

TIME: 12-2PM

Instructions to Candidates

This paper contains FOUR (4) questions

Question **one is compulsory** {total =30 Marks}

Attempt **any other two** (2) {total = 40 Marks} from the remaining questions

Be brief and to the point

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over →

SECTION 1: COMPULSORY {30 MARKS}

Question ONE

- a) In the context of surveying differentiate between the following:
- i) Grid meridians and assumed meridians [5 Marks]
 - ii) Bearings and Azimuths [5 Marks]
- b) In the context of surveying, briefly discuss the following:
- i) Electronic Distance Measurement (EDM) [2 Marks]
 - ii) Reconnaissance survey [2 Marks]
 - iii) The process of surveying [6 Marks]
- c) Briefly discuss **THREE** methods of surveying [6 Marks]
- d) Briefly discuss **FOUR** necessary precautions taken when using chain surveying instruments [4 Marks]

SECTION II: ATTEMPT ANY OTHER TWO (2) QUESTIONS {40 MARKS}

Question TWO

- a) Outline the general procedure undertaken in chain survey [12 Marks]
- b) Discuss characteristics of contours [8 Marks]

Question THREE

- a) Briefly discuss five important rules (Methods) used for the calculation of areas in Surveying: [15 Marks]
- b) The following offsets were taken from a chain line to an irregular boundary towards the right side of the chain line.

Chainage	0	20	40	60	80	100	120	
Offset 'm'	3.4	4.0	5.5	6.5	7.3	6.0	4.0	[10 marks]

- c) Use Simpson Rule to calculate the area [5 Marks]

Question FOUR

- a) Explain the importance of survey equipment calibration [4 Marks]
- b) Survey equipment calibration can be event driven as per statutory of survey Act or other relevant legislation, discuss **FIVE** events leading to such calibration [10 Marks]
- c) In the context of surveying, differentiate between calibration and validation [6 Marks]

----- END -----