



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF SPATIAL PLANNING
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SPATIAL
PLANNING AND DESIGN
SEMESTER 2022/2023 ACADEMIC YEAR**

CENTRE: MAIN CAMPUS

COURSE CODE: PPB1105

COURSE TITLE: INTRODUCTION TO MAPPING AND STATISTICS

EXAM VENUE:

STREAM: SPATIAL PLANNING

DATE:

EXAM SESSION:

TIME: 2 HOURS

Instructions:

- 1. Answer question 1 (compulsory) and ANY other 2 questions.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

Question one

- a) Explain the meaning of the following stating the class in which they belong
 - i) Topographical maps [3 marks]
 - ii) Give reasons for inclusion of marginal information on maps [3 marks]
- b) Describe four symbols used to display relief on topographic maps [4 marks]
- c) Explain the similarities and differences of land use and land cover [7 marks]
- d) Explain the meaning of “polar zenithal projection” [7 marks]
- e) In a distribution the mode and mean are 32.1 and 35.4 respectively.
 - i) Find the value of median
 - ii) Calculate simple mean of the following data

1	2	2	3	3	3	3	4	4	5
---	---	---	---	---	---	---	---	---	---

[6 marks]

Question two

- a) Describe two map projection methods that do not allow tearing and distortions [10 marks]
- b) From the following grouped data calculate the mean

5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
6	5	15	10	5	4	2	2

[10 marks]

Question three

- a) You have been recruited by the Central Bureau of Statistics in Kenya to prepare maps for census enumerators. One of the maps does not have the scale on it and your supervisor has requested you to determine the scale of the map. Discuss the methods you would use to determine the scale of the map, which has no scale [10 marks]
- b) Compute the median from the following data

20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
3	7	8	12	9	6	4	1

Question four

- a) Compute the mean deviation and variance from the following discrete values X: 5, 7, 8, 12, 18 [12 marks]
- b) Discuss the factors influencing the rate of surface water flow in a region [8 marks]

Q5.

- a) Describe the factors, which determine settlements in a region [10 marks]
- b) Calculate the standard deviation from the following frequency distribution data [10 marks]

Ci	2-6	6-10	10-14	14-18	18-22	22-26	26-30	30-34
f	1	9	21	47	52	36	19	3

END