MASINDE MULIRO UNIVERSITY OF

SCIENCE AND TECHNOLOGY (MMUST)

UNIVERSITY SPECIAL / SUPPLEMENTARY EXAMINATIONS

2021/2022 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER EXAMINATIONS

FOR THE DEGREE OF

BACHELOR OF SCIENCE IN DISASTER MITIGATION AND SUSTAINABLE DEVELOPMENT

CODE: DSM 302

COURSE TITLE: RURAL & URBAN DEVELOPMENT PLANNING

DATE: 02/08/2022   TIME: 8 – 10 AM

INSTRUCTIONS TO CANDIDATES

1. This paper consists of **FIVE** questions

2. Attempt **ONE** (1) and ANY **TWO** (2) questions

MMUST observes ZERO tolerance in examination cheating

This Paper consists of 2 printed pages, Please Turn Over ➡

QUESTION ONE

a) Name any FIVE compelling reasons why it is mandatory to develop and evaluate 'alternative plans' during a land use planning process. Justify each reason given and give examples. (10 Marks)

b) A land use planning agency conducted a field survey to evaluate how best different land use alternative plans (A, B and C) achieved the objectives (1, 2, 3 and 4) of the land use plan. The scores obtained for each alternative in achieving specific objectives are summarized in the Table shown below.

OBJECTIVES	RELATIVE IMPORTANCE OF OBJECTIVES	SCORES FOR ALTERNATIVE PLANS		
		A	B	C
1	6	7	8	5
2	7	5	6	7
3	4	3	8	3
4	3	8	5	4

Use the data given above to construct a Goals-Achievement Matrix and subsequently

determine the best land use alternative plan. (10 Marks)

c) Discuss briefly the major problems experienced by citizens as a result of poor planning of transportation in Kenya [10 Marks]

QUESTION TWO

a) Discuss briefly the various attributes of planning commonly emphasized in land use planning.

b) With the help of a labeled diagram, explain clearly how these attributes are applied in a logical

land use planning process. (20 Marks)

QUESTION THREE

Data inventory and Analysis is of crucial importance in land use planning for both urban and rural lands. Explain how each of the following soil and land properties will be a useful asset

in facilitating sound land use planning exercises. Give examples to illustrate your answer.

a) Particle Size Distribution

b) Permeability

c) Soil Erodibility

d) Land slope

e) Land cover   (20 Marks)

QUESTION FOUR

a) What is meant by the term "Land suitability analysis"?   (2 Marks)

b) Describe briefly how the 'Multiple Overlay Mapping" procedure could be used to identify suitable land for construction of a dumpsite. Assume that the land being sought should be within Kakamega town; and the important land factors to consider include, topography, soil type, flooding hazard and proximity to Central Business District. Illustrate your answer with appropriate labelled diagrams.   (18 Marks)

QUESTION FIVE

Using four different development initiatives, discuss briefly the importance of land use planning in disaster risk reduction in urban as well as rural areas. Briefly highlight the   challenges   delimiting the implementation of sound land use planning processes in Kenya.   (20 Marks)