



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS
FIRST YEAR EXAMINATION FOR THE AWARD OF THE
CERTIFICATE IN FISHERIES AND AQUACULTURE
FIRST SEMESTER 2022/2023
(SEPTEMBER - DECEMBER, 2022)

MATH 00120: BASIC MATHEMATICS

STREAM: Y1 S1

TIME: 2 HOURS

DAY: THURSDAY 12:00 P.M – 2:00 P.M

DATE: 08/2022

INSTRUCTIONS:

- 1. Do not write anything on this question paper.**
- 2. Answer ALL Questions in section A (Compulsory) and any other TWO Questions in section B.**

SECTION A (40MARKS)

- Briefly describe the following mathematical logics:
 - (a) Set theory. (2.5marks)
 - (b) Model theory. (2.5marks)
 - (c) Recursion theory. (2.5marks)
 - (d) Proof theory. (2.5marks)
- State the symbolic forms of mathematical logic. (5marks)
- Outline the formulas for solving a number system. (5marks)
- Briefly explain the importance of number systems. (10marks)
- Discuss the difference between a Relation and a Function. (10marks)

SECTION B (30 MARKS)

- Describe the following in relation to sets in mathematics:
 - (a) Semantic form. (5marks)
 - (b) Roaster form. (5marks)
 - (c) Set builder form. (5marks)
- Discuss the three different categories of permutation. (15marks)
- Explain the types of numbers with examples. (15marks)