



KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE
POSTGRADUATE DIPLOMA IN EDUCATION
SECOND SEMESTER, 2021/2022
(FEBRUARY - JUNE, 2022)**

PGDE 714: MATHEMATICS SUBJECT METHODS

STREAM: Y1 S2

TIME: 2 HOURS

DAY:

DATE:

INSTRUCTIONS

- 1. Do not write anything on this question paper.***
- 2. Answer question ONE (Compulsory) and any other TWO questions.***

QUESTION ONE

- What is mathematics education? [2 marks]
- Explain at least two perspectives of the nature of mathematics [4marks]
- By use of examples differentiate between inductive and deductive approaches to teaching mathematics [3 marks]
- State and explain Jean Piaget theory of learning and its relevance to teaching mathematics [6 marks]
- State the items a mathematics teacher must have before and while teaching and, explain each item's role. [10marks]
- By use of examples, discuss the differences between, expository, exploratory and guided discovery methods of teaching mathematics [5 marks]

QUESTION TWO

- State at least **four** national goals of education in Kenya and explain how the Ministry of Education strives to achieve them? [8 marks]

- b. State at least **four** general objectives of teaching mathematics in Kenya [4 marks]
- c. Prepare a one week scheme of work from the current KICD mathematics syllabus, and extract one detailed lesson plan from it. [8 marks]

QUESTION THREE

- a. What is microteaching? [3 marks]
- b. Explain at least four reason why it is necessary to micro teach [8 marks]
- c. Discuss at least three microteaching skills [9 marks]

QUESTION FOUR

- a. State and explain at least **five** individual differences a teacher of mathematics can expect among learners in mathematics classroom [10 marks]
- b. Discuss how a good mathematics teacher can handle each of the five differences above while teaching [10 marks]