THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

MAY – JULY 2018 TRIMESTER

FACULTY OF EDUCATION

DEPARTMENT OF UNDERGRADUATE STUDIES IN EDUCATION

PART TIME PROGRAMME

ED 304: SUBJECT METHODS MATHEMATICS

Date: JULY 2018	**Duration: 3 Hours**
INSTRUCTIONS: Answer Question ONE and any other THREE Questions	

Q1.   a) Explain the importance of Nature of Mathematics to the teaching learning
          process   **(3Marks)**

b) Highlight five characteristics of a good Mathematics teacher   **(5Marks)**

c) Justify the role of testing in the teaching and learning of Mathematics
                                                                           (7Marks)

d) Using the syllabus extract for fractions (provided in appendix I), construct a 1
    week schemes of work with but not limited to the following;
   - a class demonstration
   - Elements of the formal stage of Piaget's theory
   - Assignments which require comprehension/ knowledge
     /synthesis skills   **(10marks)**

Q2.   a) Using any topic in mathematics, outline how you will select materials, choose
          teaching strategy(s) and evaluate the learners   **(12 marks)**

b) Give reasons why Mathematics is considered a science   **(3marks)**

Q3.   a) Critique the use of calculators in a Mathematics class   **(6Marks)**

b) Outline the general aims of mathematics and explain how this affects the
   teaching of mathematics in secondary schools today.   **(9 Marks)**

Q4. a) Discuss any **Three** features of a good Mathematics examination Paper
(6Marks)

b) Discuss the shortcomings of syllabi and outline the adjustments that
Mathematics teachers should make to mitigate them. **(9marks)**

Q5. a) Explain **three** functions of classroom tests **(6marks)**

b) ICT integrated lessons are being encouraged today for use in teaching
mathematics. Discuss the advantages and challenges involved.**(9marks)**

Q6. a) State and explain three types of project work in Mathematics
giving specific examples of each. **(6marks)**

b) Write a 40 minute lesson plan on any subtopic in fractions. **(9marks)**

END