



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2014/2015
DIGITAL SCHOOL OF VIRTUAL & OPEN LEARNING
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
EDUCATION
ECE 304: SCIENCE AND MATHEMATICS METHODS

DATE: TUESDAY 23RD DECEMBER 2014 TIME: 2.00 P.M. – 4.00 P.M.

INSTRUCTIONS

SECTION A (30%). Answer ALL Questions

1. Explain the meaning of the following concepts
 - a) Science
 - b) Reversibility
 - c) Science inquiry method

(8 marks)

2. Distinguish between the terms exploration and discovery

3. Briefly explain how ECE science and math activities contribute to the achievement of any three National Goals of Education in Kenya.

(10 marks)

4. Explain science in the following perspectives;
 - a) Process
 - b) Product
 - c) Dynamic science

(12 marks)

SECTION B (40%). Attempt any TWO questions only

5. Discuss Piaget's theory of cognitive development in relation to scientific abilities at every stage. (20 marks)
6. Critically analyse the rational of ECE math and science activities in early childhood (20 marks)
7. Describe the 5-E model of teaching science in ECE. Highlight what happens at each stage (20 marks)
8. Giving reasons explain why you would recommend that young children should learn science and math. (20 marks)