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MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS**

**2018/2019 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER**

**SCHOOL OF EDUCATION**

**BACHELOR OF EDUCATION**

**COURSE CODE: ECI 3116**

**COURSE TITLE:** **SUBJECT METHODS IN**

**MATHEMATICS**

**DATE: 10TH DECEMBER 2018 TIME: 0830 – 1030 HOURS**

**INSTRUCTIONS TO CANDIDATES**

Answer Question **ONE** and any other **TWO** questions

*This paper consists of* ***two*** *printed pages. Please turn over.*

**Question 1 (30marks)**

1. Differentiate between the learning theories of constructivism and social cognitive theory (4marks)
2. Explain the meaning of the following terms as used in mathematics education
3. Intended curriculum (2marks)
4. Attained curriculum (2marks)
5. Briefly explain 2 general objectives of secondary school mathematics in Kenya (2marks)
6. Explain the meaning of the following terms as used in mathematics education
7. Epistemology (2marks)
8. Ontology (2marks)
9. Briefly discuss three types of resources necessary in mathematics classroom (6marks)
10. Briefly explain the 5 key components of a scheme of work (5marks)
11. Identify and discuss 5 common errors made by students when dealing with topic of probability (5marks)

**Question 2 (20marks)**

1. Briefly discuss and give examples of how a teacher can facilitate learning of mathematics by
2. Memorization (2 Marks)
3. Application of skills ( Marks)
4. Understanding (2 Marks)
5. In constructivism approach to learning, explain the teachers and learners’ roles in the following views;
6. Endogenous (3 Marks)
7. Exogenous (3 Marks)
8. Consider the topic of MEASUREMENT in the secondary school syllabus. Discuss how this topic has been covered across the grades in the syllabus. (8marks)

**Question 3 (20marks)**

1. Briefly discuss 5 ways in which mathematics process can support understanding of content in a mathematics classroom (10marks)
2. Discuss three qualities of a good mathematics textbook (6marks)
3. Assessment should enhance mathematics learning. Discuss (4marks)

**Question 4 (20marks)**

1. Discuss the nature of mathematics based on the views of Plato and Aristotle (6marks)
2. Describe the modern view of mathematics (5marks)
3. What philosophical assumptions does the teaching of mathematics in Kenya rest on? (9marks)

**Question 5 (20 marks)**

1. Discuss 5 strategies of effective teaching of mathematics (10marks)
2. Discuss how the goals of secondary education in Kenya foster the Kenya Vision 2030? (10marks)

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