



MACHAKOS UNIVERSITY

University Examinations 2016/2017

SCHOOL OF EDUCATION

DEPARTMENT OF COMMUNICATION TECHNOLOGY

SECOND SEMESTER SECOND EXAMINATION FOR DIPLOMA IN EDUCATION
ARTS & SCIENCE

ECT 0212: TEACHING METHODS IN MATHEMATICS

DATE: 30/5/2017

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

Answer Question One and Any Other Two Questions

1.
 - a) Explain the meaning of the term mathematics education' (4 marks)
 - b) Explain the meaning of a table of test specifications (4 marks)
 - c) Explain the interrelationship between the following tools as used in mathematics instruction
 - i) Mathematics syllabus
 - ii) Mathematics scheme of work
 - iii) Mathematics lesson plan. (6 marks)
 - d) Construct a mathematical objective in each of the following domains
 - i) Cognitive domain
 - ii) Affective domain
 - ii) Psychomotor domain (6 marks)
 - e) Select a topic in the KCSE Mathematics syllabus and prepare a 40 minutes lesson plan. (10 marks)

2. a) Explain the importance of using teaching resources in mathematics. (6 marks)
- b) Explain each of the following theories in relation to teaching and learning of mathematics
- i) Instructional theory
- ii) Learning theory (6 marks)
- c) Explain four reasons of testing learners in mathematics (8 marks)
- 3 a) Explain the purpose of the remarks column in a mathematics scheme of work (4 marks)
- b) Explain the meaning of each of the following terms, citing an example in each.
- i) Formative assessment
- ii) Summative assessment (6 marks)
- c) Explain five reasons of using a mathematics text book in a class room (10 marks)
4. a) Discuss five limitations of the secondary school mathematics syllabus. (10 marks)
- b) Explain five reasons why a mathematics teacher should plan for teaching. (10 marks)
5. a) Discuss five factors to consider in choosing a mathematics class text book. (10 marks)
- b) Explain five aims of teaching mathematics. (10 marks)