



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL COMMUNICATION AND TECHNOLOGY

DECEMBER SESSION EXAMINATION FOR

BACHELOR OF EDUCATION (EARLY CHILDHOOD EDUCATION)

ECT 305: SUBJECT METHODS CHEMISTRY

DATE: SCHOOLBASED

TIME:

INSTRUCTIONS: Answer Question One and Any Other Two

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Give **five (5)** reasons why developing Instructional objectives is a basic requirement during planning for chemistry teaching. (5 marks)
- b) Using specific examples from chemistry teaching at secondary school level, describe **five (5)** main areas in which chemistry has provided great contributions to the society. (5 marks)
- c) Explain the planning process for teaching a chemistry lesson (6 marks)
- d) Considering the topic of 'structure and bonding' write two instructional objectives in the following levels of cognitive domain (6 marks)
 - i) Knowledge.
 - ii) Comprehension
 - iii) Application
- e) Describe the four types of scientific skills as assessed in chemistry. Give examples of each (8 marks)

QUESTION TWO (20 MARKS)

- a) Explain the design and considerations to be made when constructing chemistry Laboratory (10 marks)
- b) List down **five (5)** advantages using practical work in chemistry teaching. (10 marks)

QUESTION THREE (20 MARKS)

- a) Critically analyze the importance of short answer questions over essay questions in chemistry tests. (10 marks)
- b) Construct a sample of a structured question that can be used to assess chemistry learning and give **five (5)** advantages of using this type of test. (10 marks)

QUESTION FOUR (20 MARKS)

- a) By use of illustrative examples, explain five reasons why a teacher would choose to use demonstration method of teaching instead of class experiment. (10 marks)
- b) Describe the role of teacher in Classroom practical work (10 marks)

QUESTION FIVE (20 MARKS)

- a) What are the limitations of lecture method in the teaching of chemistry? (5 marks)
- b) Discuss the limitations of using commercial Schemes of work in chemistry teaching. (5 marks)
- c) Most learners complain that chemistry is a difficult subject and easily lose attention during learning. Describe five ways in which a teacher can motivate learners and sustain their attention during the teaching. (10 marks)