



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF EDUCATION

DEPARTMENT OF COMMUNICATION TECHNOLOGY

THIRD YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF
EDUCATION

ECT 305: SUBJECT METHODS CHEMISTRY

DATE: 13/12/2017

TIME:

INSTRUCTIONS

Answer Question One and Any Other Two Questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Outline **five** aims of teaching Chemistry at secondary school level in Kenya. (5 marks)
- b) By use of relevant examples from chemistry subject, differentiate between deductive and inductive approaches to teaching. (4 marks)
- c) Planning is a key step in chemistry teaching. What does planning for teaching a chemistry lesson involve? (6 marks)
- d) A teacher should use a teaching method that is effective. Describe **five** characteristics of effective heuristic methods of teaching chemistry. (5 marks)
- e) Explain the importance of instructional objectives in the teaching of chemistry. (5 marks)
- f) Justify the common use of short answer questions over essay questions in chemistry tests. (5 marks)

QUESTION TWO (20 MARKS)

- a) Discuss **five** advantages using practical work in chemistry teaching. (10 marks)

- b) Explain **five** reasons why a teacher would choose to use demonstration method of teaching instead of class experiment. (10 marks)

QUESTION THREE (20 MARKS)

- a) In teaching chemistry questioning technique and dealing with student answers play an important role in a lesson. Discuss **five** major roles played by question answer technique in the Chemistry classroom (10 marks)
- b) Describe **five** ways in which learners' motivation in chemistry learning can be improved. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Describe the **five** safety equipment found in the chemistry laboratory and give the uses of each. (10 marks)
- b) Give **five** advantages of improvising materials for chemistry teaching. (5 marks)
- c) Describe the basic characteristics of an appropriate model for teaching a chemistry lesson on 'Structure and bonding' (5 marks)

QUESTION FIVE (20 MARKS)

- a) Describe **four** types of skills developed during chemistry teaching giving an example of each. (8 marks)
- b) Discuss the steps you would follow in planning and implementing a teacher demonstration on the sub-topic 'Laboratory preparation of chlorine'. (12 marks)