****

**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2020/2021 ACADEMIC YEAR THREE**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF EDUCATION, ARTS AND SOCIAL SCIENCES**

**FOR THE DEGREE OF BACHELOR OF EDUCATION (ARTS)**

**COURSE CODE: CIM 322**

**COURSE TITLE: SPECIAL METHODS IN CHEMISTRY**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 07/10/2021 TIME: 12.00-2.00 PM**

**INSTRUCTION TO CANDIDATES**

* **The examination has FIVE (5) questions**
* **Question ONE (1) is COMPULSORY**
* **Choose any other TWO (2) questions from the remaining FOUR (4) questions**
* **Use sketch diagrams to illustrate your answer whenever necessary**
* **Do not carry mobile phones or any other written materials in examination room**
* **Do not write on this paper**

**This paper consists of TWO (2) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Define:
2. Chemistry                                                       (1 mark)
3. Chemistry Education                                (2 marks)
4. State the objectives of teaching chemistry in Secondary schools    (3 marks)
5. Outline three qualities of a good chemistry teacher.                      (3 marks)
6. State six level of hierarchy of learning process in chemistry.         (3 marks)
7. Explain why chemistry is often referred to as the central science    (3 marks)
8. Explain five uses of common apparatus in the laboratory (5 marks)
9. State seven laboratory safety rules                                                   (7 marks)
10. State the criteria for identifying a pure substance from the mixtures.   (3 marks)

**QUESTION TWO (20 MARKS)**

1. What is a scheme of work?                                                               (2 Marks)
2. Draw out a scheme of work to cover three weeks of a chemistry lesson for the Form one, at three periods per periods per week?                        (15 Marks)
3. Illustrate three elements of a Chemistry lesson?                                  (3 Marks)

**QUESTION THREE (20 MARKS)**

1. The importance of chemistry education to the nation and the world at large cannot be underestimated. Explain 5 factors influencing chemistry education against its recognition and make Kenya ranked among the first world developed nations in the next fifteen years.   (15 Marks)
2. State five advantages of doing practical’s during Chemistry lessons    (5marks)

**QUESTION FOUR (20 MARKS)**

1. You intend to teach form 1 students conductors and non-conductors of electricity. Prepare a lesson plan for this, clearly showing how you would go about teaching it.                   (10 Marks)
2. Explain FIVE roles of chemistry Education in the society          (5 Marks)
3. Explain how a teacher would use informal learning experiences to enhance student learning outcomes in chemistry(5 Marks)

**QUESTION FIVE (20 MARKS)**

1. The greatest inherent problem associated with chemistry and its education is hazard. Discuss 4 Hazard effects which made most teachers and technologists scared from conducting chemistry practicals with the students?   (8 Marks)
2. Write a short essay on how you would develop a project in chemistry in secondary school by stating clearly all the stages.                             (10 Marks)
3. Outline any two characteristics of a project?                                (2 Marks)