(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

BACHERLOR OF EDUCATION (SCIENNCE)

2021/2022 ACADEMIC YEAR

YEAR THREE SEMESTER ONE

SPECIAL SUPPLEMENTARY EXAMINATIONS

COURSE CODE: ESM 313

COURSE TITLE: CHEMISTRY EDUCATION

INSTRUCTIONS TO CANDIDATES

Answer Question One and any other two (2) Questions

TIME: 2 Hours

Question 1

a) Name the common accidents in the school chemistry laboratory (4 marks)
b) State 3 reasons why proper storage of chemistry chemicals is stressed (6 marks)
c) Describe the 4 steps involved in problem solving (4 marks)
d) In what ways do chemistry projects contribute to learning problem-solving? (6 marks)
e) Describe the main characteristics of structured questions (4 marks)
f) List the three domains of chemistry (3 marks)
g) Outline the role of the teacher in demonstration work (3 marks)

Question 2

a) State Daltons ideas that were considered with a lot of importance (10 marks)
b) With the use of a flow chart, demonstrate the evolution of chemistry (10 marks)

Question 3

a) State the aims of practical work in secondary school chemistry (8 marks)
b) Discuss the conditions under which it is best to teach a chemistry class using demonstrations (8 marks)
c) Outline the criteria that a chemistry teacher needs to use when choosing the type of fieldwork that he/she needs to show the link between the chemistry taught in class and natural phenomenon (4 marks)

Question 4

a) A school chemistry laboratory structure comprises three separate rooms. Name and state the function of each room (6marks).
b) Draw a chemistry laboratory sketch plan to show the three main rooms (10 marks)
c) Briefly discuss the use of a fume cupboard (4 marks)

Question 5

a) Choose a topic in Chemistry secondary school curriculum and prepare a two weeks scheme of work (10 marks)

b) From the schemes of work prepared in (a) above, prepare a forty-minutes chemistry lesson plan (10 marks)