



GRETSA UNIVERSITY - THIKA

**UNIVERSITY EXAMINATIONS
MAY - AUGUST 2018 SEMESTER**

**CERTIFICATE IN ENVIRONMENTAL SCIENCE/
HEALTH RECORDS/ COMMUNITY NUTRITION**

COURSE CODE: CIEH 011

COURSE TITLE: BASIC APPLIED SCIENCE

DATE: 7 AUGUST 2018

TIME: 11.30 AM – 2.30 AM

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: *All exam rooms are under CCTV surveillance during the examination period.*

SECTION A**[ANSWER ALL QUESTIONS IN THIS SECTION]****MULTIPLE CHOICE QUESTIONS [1-5]****[ONE MARK EACH]**

1. The formula showing simplest whole number ratio is
 - A. Scientific
 - B. Mathematical
 - C. Molecular
 - D. Empirical

2. The rate of change of displacement is called?
 - A. Velocity
 - B. Acceleration
 - C. Speed
 - D. Force

3. In periodic table, period number indicates number of
 - A. Neutrons
 - B. Protons
 - C. Electrons
 - D. Photons

4. Which of the following quantities is a vector?
 - A. Speed
 - B. Displacement
 - C. Acceleration
 - D. Motion

5. The ions having positive charges are
 - A. Cations
 - B. Anions
 - C. Molecules
 - D. Atoms

SHORT ANSWER QUESTIONS: (ANSWER ALL QUESTIONS IN THIS SECTION)

1. Outline any 5 types of physical quantities indicating their basic unit [5marks]
2. By the use of a diagram, Explain briefly the bonding of sodium chloride [6 Marks]
3. Outline any 3 differences between mass and weight [6 Marks]
4. with an aid of a diagram, explain briefly the hooks law [6 Marks]
5. Explain briefly any 6 properties of transition metals [6 Marks]
6. Describe the structure of an atom [6 Marks]

SECTION B

[CHOOSE ANY THREE QUESTIONS]

1.
 - a) Discuss the 3 states of matter [6 marks]
 - b) Explain any 4 differences in properties of the three states of matter [8 marks]
 - c) Briefly describe the kinetic theory of matter [6 marks]
2.
 - a) Discuss the various changes of states of matter due to change in temperature [8 Marks]
 - b) Explain briefly the arrangements of elements in the periodic table [12 Marks]
3.
 - a) Briefly describe 5 types of forces [10Marks]
 - b) Discuss any 5 effects of forces on body [10 Marks]
4.
 - a) A body moving initially at 30m/s accelerates uniformly at two 80m/s within 10 second.
What is the acceleration of the body the end of 5 seconds? [6Marks]
 - b) Discuss any 4 sources of energy [8Marks]
 - c) Explain briefly any 4 forms of energy applicable in health [6 Marks]