VIVA COLLEGE SCHOOL HOLIDAY INTERVENTION FACULTY OF SCIENCE

SENIOR THREE

CHEMISTRY

- 1. Suggest ways the knowledge of chemistry can be used to combat the corona virus problem (15 marks)
- 2. (a) With examples, define
 - I. A hydrocarbon
 - II. A functional group
 - III. A saturated organic compound
 - IV. An unsaturated organic compound
 - V. An alkene
 - (b) Name the following hydrocarbons
 - (i) CH₃CH₃ (ii) CH₂=CH₂ (iii) CH≡CH
 - (c) State one reagent that can be used to distinguish between hydrocarbon (i) and hydrocarbon (ii). Sate what is observed when each of the hydrocarbon is treated with the reagent named.
 - (d) Describe with the aid of a well labeled set up of apparatus how a dry sample of cabon dioxide gas can be prepared in the lab (your answer should include the procedure, diagram and equation)

BIOLOGY

- 1. (a) Explain how the action of muscles causes carbon dioxide to pass from the lungs into the atmosphere
 - (b) How does oxygen move from the air in alveoli into body tissues?
 - (c) How are respiratory surfaces adapted to their functions?

PHYSICS

- 1. What is the difference between Weight and Upthrust with reference to floatation
- b) Explain why a living person is able to swim without sinking
- c) A block of wood weighs 5N in air and 1N when immersed in water. Calculate the loss in weight
- 2 Define refraction of light. ii)Explain what causes refraction
- b) A monochromatic light is incident on air glass interface at an angle of 30° .calculate the angle of refraction($n_g=1.52$, $n_a=1.00$)
- c) Describe the mode of operation of a slide projector.
- 3.a) What is meant by the term Inertia?
- b) Explain what happens when a man jumps out of a moving boat.
- c) Draw a suitable graph for a stone falling from a certain height.

S.3 AGRIC QUESTIONS:

- 1. In what ways has the corona virus epidemic affected Agricultural production in Uganda?
- 2. Explain the negative and positive ways how technology has affected agricultural production in Uganda.