



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF EDUCATION**  
**DEPARTMENT OF SPECIAL NEEDS EDUCATION AND EARLY CHILDHOOD**  
**DEVELOPMENT**  
**UNIVERSITY EXAMINATION FOR THE DIPLOMA IN SPECIAL NEEDS**  
**EDUCATION**  
**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2017/2018 ACADEMIC YEAR**  
**MAIN CAMPUS REGULAR**

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**COURSE CODE: ESN 2217**

**COURSE TITLE: SCIENCE AND AGRICULTURE**

**EXAM VENUE:**

**STREAM: DIP. SNE**

**DATE:**

**EXAM SESSION:**

**TIME: 1 ½ HOURS**

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**Instructions:**

- 1. Answer Question ONE (COMPULSORY) and ANY other 2 questions**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

## QUESTION ONE

Explain the meanings of each of the following terms

- a) Health (2marks)
- b) Hygiene (2marks)
- c) Asteroid (2 marks)
- d) Comet (2 marks)
- e) Miscibility (2 marks)
- f) Solubility (2 marks)
- g) Soil structure (2marks)
- h) Soil fertility? (2marks)
- i) State the components of soil (3marks)
- j) State **two** differences between boiling and evaporation. (2marks)
- k) Give the differences between plants and animals (2marks)
- l) List down **two** major components of the environment (2marks)
- m) Name the constellations represented by pictures below (2marks)

(i)



(ii)



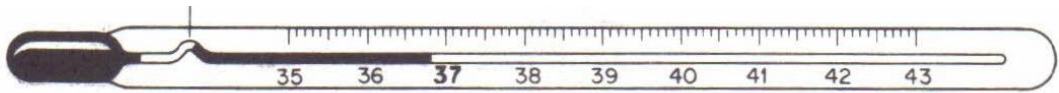
- n) List down the steps followed in scientific problem solving process. (3marks)

## QUESTION TWO

- a) Define the following terms as used in health education
- I. Sanitation (2 marks)
  - II. Grooming (2marks)
- b) List down four communicable diseases (4 marks)
- c) Give two none communicable disease (2 marks)
- d) Describe the proper hygienic practices required to keep the body clean and to reduce spread of diseases. (10marks)

## QUESTION THREE

- a) Below is a useful instrument.



- i. Name the instrument. (1 mark)
  - ii. What is it used to measure? (1 Mark)
  - iii. Explain the properties of the liquid used in the instrument (3 marks)
  - iv. Explain how the instrument is designed to measure the aspect named in (ii) above. (5 marks)
- b) Using a dry and wet bulb thermometer, pupils recorded the temperature readings in the table below at 10:00 a.m. on different days of the week.

Days of the week	Thermometer Reading	
	Wet bulb $^{\circ}\text{C}$	Dry bulb $^{\circ}\text{C}$
Monday	26	26
Tuesday	24	27
Wednesday	25	30
Thursday	21	28
Friday	25	20

- (i) What aspect of weather can be determined using the above readings? ( 1Marks)
- (ii) On which day did the pupils make an error in the readings? (1mark)
- (iii) What features makes the wet bulb thermometer different from the dry bulb thermometer? (2 marks)
- (iv) Describe the condition of the atmosphere on Monday. (4 marks)
- (v) State two weather conditions that cannot be taught in lower Primary Classes (2marks)

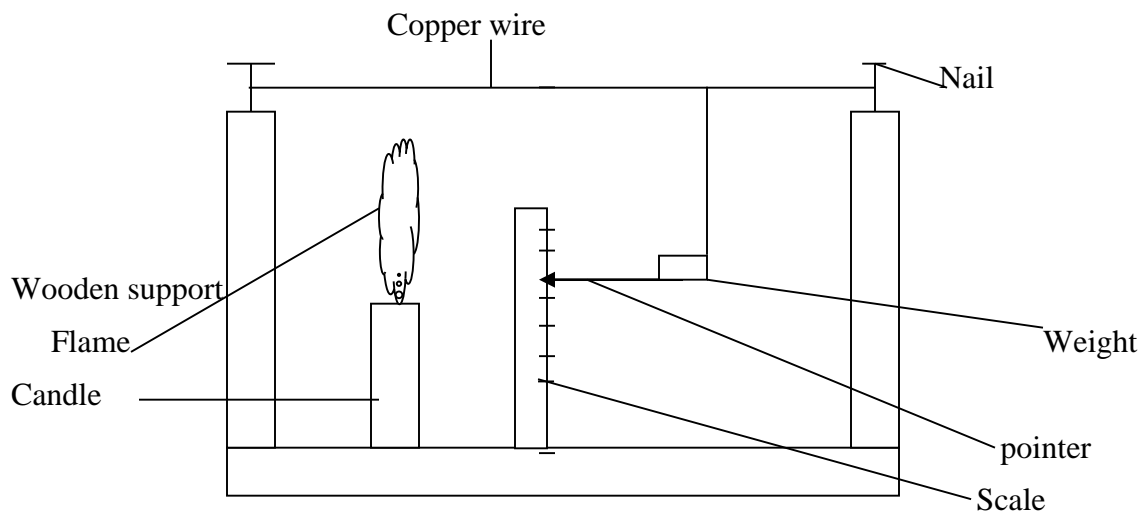
**QUESTION FOUR**

- a) Explain the ways through which the structure of a water logged clay soil can be improved (10 marks)
- b) Discuss the benefits of organic matter in the soil (10 marks)

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**QUESTION FIVE**

- a) A teacher found a group of children using the apparatus below during lunch time



- (i) What can the apparatus be used to show? (1 mark)

- (ii) Explain how the apparatus works to show the aspect named in (i) above. (6marks)
- (iii) What are the three main skills that the pupils will practice when making and using the apparatus? (3marks)
- b) By use of well labeled diagrams, describe a simple experiment that can be used to demonstrate the expansion and contraction of air (10 marks)