Name……Adm no……. Stream……..

HOLIDAY PHYSICS ASSESSMENT

FORM 2 , OPENER PHYSICS EXAM

TIME : 2 HOURS ,

Answer all questions

SECTION A 25 MKS

1. a) Give one relationship between physics and agriculture 2mks

   b) Explain the first aid procedure to be done when one is cut in the laboratory 2mks

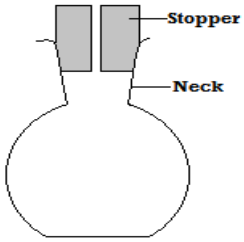
2. a) There are two types of physical quantities: basic and derived quantities, state the difference between the two. 2mks

   b) give one example of basic physical quantity and one example of derived quantity 2mks

3. Philip found that the perimeter of his farming plot was approximately 500 strides. His stride was 1.1 m long. What was the perimeter of the plot? 2mks

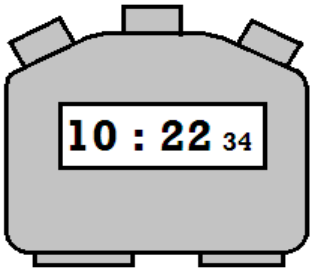
4. Define area and state its S.I unit 2mks

5. a) name the apparatus shown below 1mk

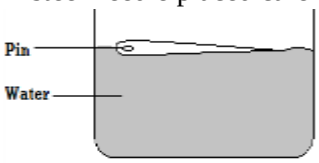


b) state the function of the apparatus named above 2mks

6. Express the time shown on the stop watch screen below in SI. 3mks



7. A steel needle placed carefully on the surface of water floats ,as shown below



a) Explain why the needle floats 2mks

b) If somebody stirred the water , state the observation to be made 1mk

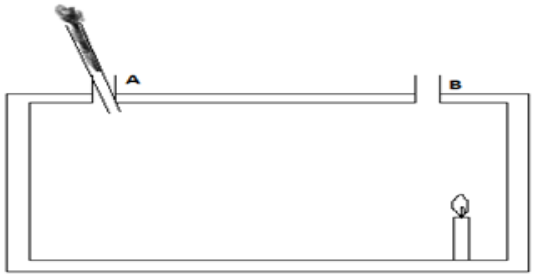
8. A man has a mass of 70kg. Calculate:

a) His weight on earth, where the gravitational field strength is 10N/kg. 2mks

b) His weight on the moon, where the gravitational field strength is 1.7N/kg. 2mks

SECTION B 55 MKS

9. The figure below shows a box with two glass tubes A and B projecting from the top of a rectangular wooden box with removable glass front.



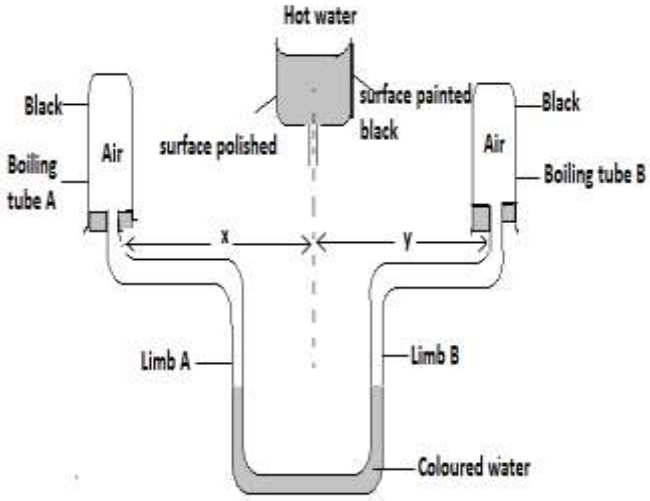
a) What will be the direction of the smoke through the box? Show by drawing 2mks

b) What conclusion can be made from the observation? 2mks

c) Why are the ventilations for a room made high up the roof? 3mks

d) State three differences between heat and temperature 3mks

e) Study the fugure below and answer the questions that follow



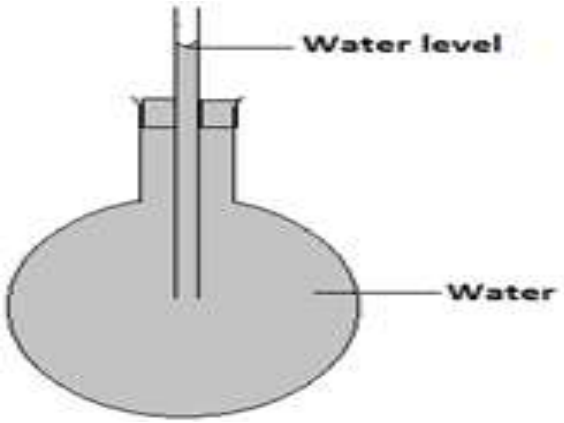
i) Which boiling tube between A and B receives more heat 1mk

ii) Eplain reason for your answer above 2mks

iii) State observation made in the limbs containing coloured water 1mk

iv) Explain your observation in roman iii above 2mks

10. (a) The figure below shows a glass flask full of water at 10°C and sealed with a bung. A long glass tube passes through the bung into the water. The water level in the tube is as at point X. When the flask is placed in hot water, the water level initially falls a little below X and then rises some way above X.



Suggest why

a) The water level initially falls. 1mks

b) The water level then rises. (2mks)

c) . The rise is greater than the fall. (2mk)

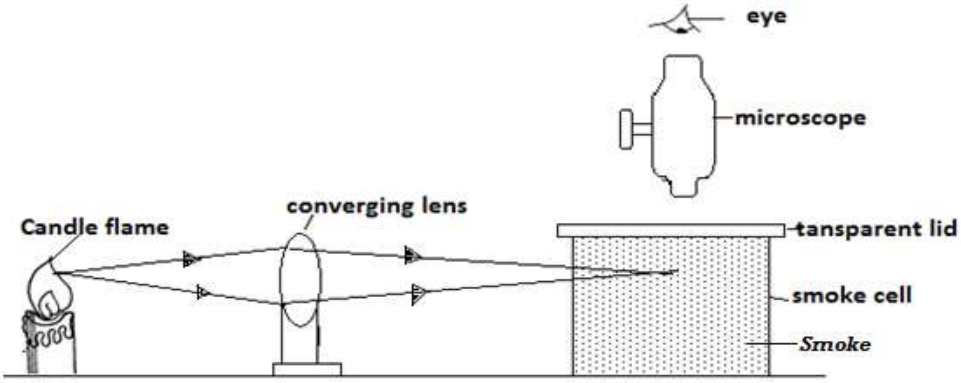
d) Suggest two changes that would make the fall and rise of the water level greater. (2 mark)

e) State two variables that must be controlled in an experiment for comparing thermal conductivities of different metal rods of the same diameter. 2mks

f) Explain any three effects of anomalous expansion of water 3mks

g) List four properties of a good thermometric liquid 4mks

11. Form one students in gianchere secondary school conducted an experiment shown below , smoke was introduced into the smoke cell by a straw



a) State the observation they made 1mk

b) Explain the observation above 2mks

c) Give the conclusion of the experiment above 1mk

d) State the function of the converging lens 1mk

e) State the function of the microscope 1mk

12. The mass of an empty density bottle is 25.0g. Its mass when filled with water is 50.0g and when filled formalin its mass is 60.0g. Calculate.

a) Mass of water 1mk

b) Volume of water. 2mks

c) Volume of bottle. 1mk

d) Mass of formalin. 1mk

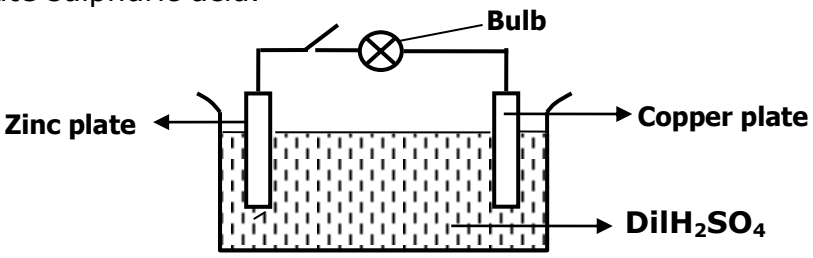
e) Volume of formalin. 1mk

f) Density of formalin 2mks

13. a. Distinguish between electromotive force and potential difference (2marks)

b. State one major difference between a primary cell and a secondary cell (1mark)

c. The figure below shows a simple cell made of copper and zinc electrodes dipped in dilute sulphuric acid.



a) Identify the cathode and the anode. (2 marks)

Cathode ……..

Anode ……

b) State the two common defects in a simple cell. (2 marks)

c) Explain how the defects in b) are minimized. (2 marks)

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