NAME: ..... ADM NO: .....

SCHOOL: ..... DATE : .....

CANDIDATE'S SIGNATURE: .....

232
PHYSICS
THEORY
JULY / AUGUST 2016
TIME: 2 HOURS

COMMON EVALUATION TEST – 2016
FORM 1

PHYSICS
PAPER 1
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

(a) *Write your **Name, Admission Number** and **School** in the spaces provided.*
(b) ***Sign** and write the **date** of examination in the spaces provided above.*
(c) *This paper consists two sections **A** and **B**.*
(d) *Answer **all** questions in Section **A** and **B** in the spaces provided.*
(e) *All working **MUST** be clearly shown.*
(f) *Mathematical tables and electronic calculators **may be** used.*

FOR EXAMINER'S USE ONLY

QUESTION	MAX. SCORE	CANDIDATE'S SCORE
1 – 11	100	

Answer ALL questions in the spaces provided

1. Give a reason why shirts must be tucked up and long hair tied while in the laboratory. (1mk)

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2. A ream of 250 papers has a mass of 1.25kg. Find the mass of a single sheet in: (3mks)

   (a) Kg.

   (b) g

3. A drug manufacturer gives the mass of the active ingredient in a tablet as 5mg. Express this quantity in kilogram and in standard form. (2mks)

4. Convert the following volumes in m^3. (2mks)

   (a) $14000000cm^3$

   (b) 20ml

5. (a) Define density and sate its SI units. (2mks)

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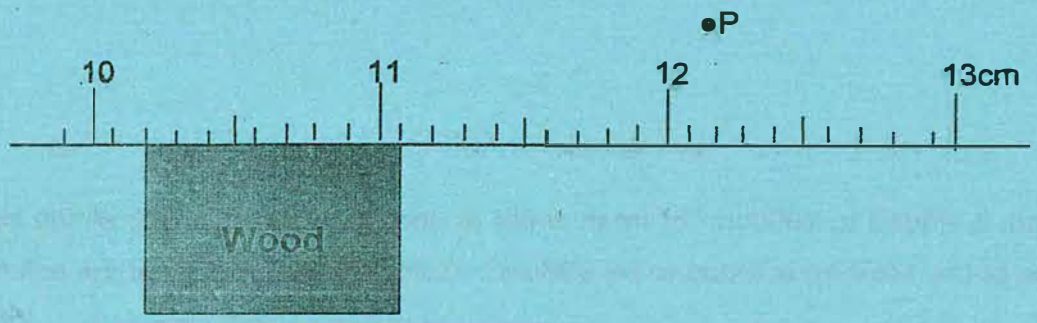
(b) The mass of one sheet. (2mks)

(c) The volume of one sheet. (2mks)

(d) The density of one sheet. (2mks)

8.



(a) State the actual length in cm of the piece of wood shown in the figure above. (2mks)

(b) What term is give to type of error obtained from the rule if one was viewing the reading from point P? (1mk)

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9. (a) Explain giving <u>two</u> relevant examples, how Physics is applied in other subjects. (4mks)

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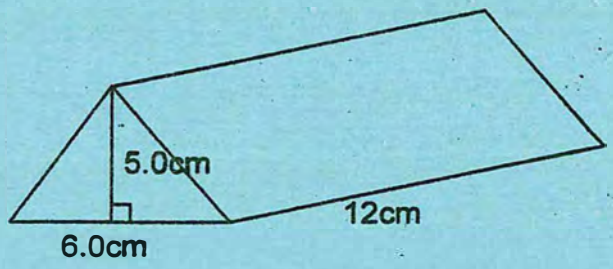
(b) Find the volume of the prism below. (3mks)



(c) If the mass of the prism is 900g, calculate the density of the prism in kg/m^3. (3mks)

6. 17.96g of common salt is added to 1000cm^3 of fresh water of density 1.0g/cm^3. After all the salt has dissolved, the volume of the solution is found to be 998cm^3. Calculate the density of the solution. (4mks)

7. A ream of foolscaps contain 500 papers and has a mass of 2kg. The size is 300mm by 200mm by 50mm. Find:-

(a) The thickness of one sheet of paper. (2mks)

(b) Name any **four** careers that require physics as a main subject. (2mks)

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10. A brick 20cm long, 10cm wide and 5cm thick has a mass of 500g. Determine the:-

(a) Greatest pressure that can be exerted by the brick on a flat surface. (3mks)

(b) Least pressure that can be exerted by the brick on a flat surface. (3mks)

(c) Define Atmospheric Pressure. (1mk)

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(d) A girl in a school situated in the coast region (sea level) plans to make a barometer using sea water of density 1030kgm^{-3}. If the atmospheric pressure is 103000Nm^{-2}, what is the minimum length of the tube that she will require? (3mks)

11. (a) Define diffusion. (2mks)

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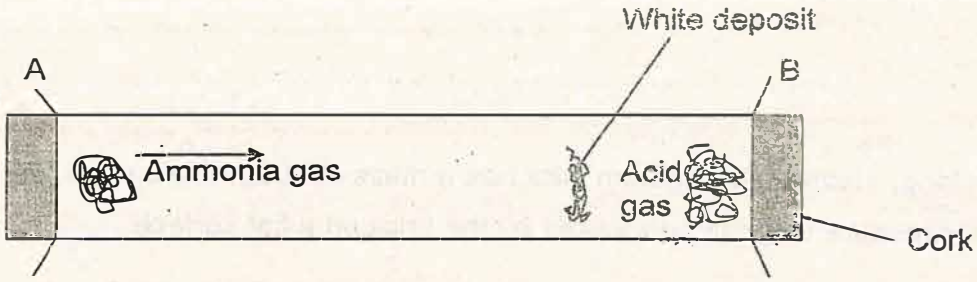
(b) In the figure below, Ammonia gas and an acid gas diffuse and react to form a white deposit on the walls of the glass tube. The deposit forms nearer end B.



(i) Which gas diffused faster? (1mk)

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(ii) How does the rate of diffusion depend on the size and mass of a gas? (2mks)

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(c) If the experiment was performed at a higher temperature, would you expect it to take longer or shorter time to form the white deposits? Explain. (3mks)

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