

VILLA THERESA HIGH SCHOOL

STD: VIII

SECOND UNIT TEST AUGUST 2014 TIME 1HR. 15 MIN

DATE: 28/8/14

SUBJECT: PHYSICS

MARKS: 50

Question 1

- Define angle of incidence and angle of reflection. [2]
- In summer telephone wires are put a little loose between two poles. Give reason. [2]
- What do you understand by anomalous behaviour of water? At what temperature the density of water is maximum? [2]
- Express 95°F in degree Celsius. [2]
- Two simple pendulums have lengths 2 m and 4 m respectively at a certain place. Which pendulum will make more oscillations in a minute? Explain your answer. [2]

Question 2

- Name the part of the Vernier callipers used to measure the following. (i) The internal diameter of the mug. (ii) Depth of a small bottle. [2]
- The circular scale of a screw gauge is divided in 100 divisions and the screw moves 1 mm ahead in 2 revolutions of the circular scale. Find the pitch and the least count. [2]
- State the S.I. units of acceleration and density. [2]
- (i) In Celsius and Fahrenheit scales of temperature the lower fixed point is _____
(ii) The least count of stop watch is _____ [2]
- State two conditions for the beam balance to be true. [2]

Question 3

- A Vernier has 10 divisions and they are equal to 9 divisions of the main scale. If the main scale is calibrated in mm, what is its least count? [2]
- State how does the time period of a simple pendulum depend upon (i) mass of the bob (ii) acceleration due to gravity? [2]
- Define coefficient of linear expansion and state its S.I. unit. [2]
- State the two laws of reflection of light. [2]
- Find the number of images formed when two mirrors are inclined at an angle of 30° [2]

Question 4

- Distinguish between a regular reflection and irregular reflection. Draw diagrams to support your answer. [3]
- How are letters of the word 'AMBULANCE' written on an ambulance? Why are they written in the manner stated by you? [3]



Contd. 2..

- c. The least count of a vernier callipers is 0.01 cm and its zero error is -0.02 cm. While the reading the length of a rod, the main scale reading is 4.8 cm and 6th division on the vernier scale is in line with a marking on the main scale. Calculate the correct length of the rod. [4]

Question 5

- a. A ray of light is incident normally on a plane mirror. (i) What is the angle of incidence? (ii) What is the direction of the reflected ray? Show it on a diagram. [3]
- b. Write any three characteristics of the image formed by plane mirror. [3]
- c. The pitch of the screw gauge is 1mm and there are 100 divisions on the circular scale. While measuring the diameter of a wire, the main scale reads 3mm and 55th division of the circular scale is in line with the base line. Find the diameter of the wire. [4]

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