

MAR THOMA RESIDENTIAL SCHOOL THIRUVALLA

SECOND TERMINAL EXAMINATION

Marks: 80

STD: VII

PHYSICS

Time: 2 h

SECTION -I(40 Marks)

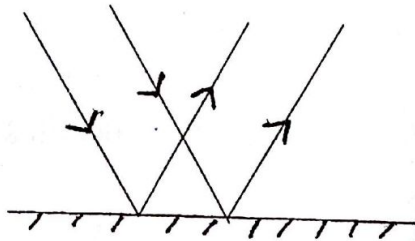
(Answer all questions)

QUESTION -1

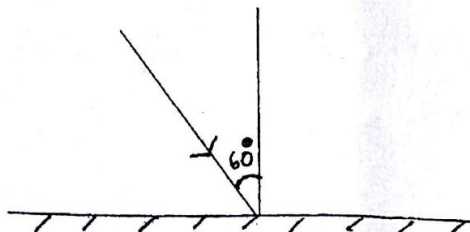
- a) i) Define energy
ii) State its SI unit. (2)
- b) i) State any one advantage of hydro energy.
ii) What is biogas? (2)
- c) State the energy change in the following:
i) Photosynthesis ii) Loudspeaker (2)
- d) i) What is nuclear energy ?
ii) State one use of wind energy. (2)
- e) Give an example for the following transformation of energy.
i) Chemical energy to light energy.
ii) Electrical energy to heat energy. (2)

QUESTION -2

- a) i) Define the kind of reflection shown below :



- ii) Give an example where such a reflection happen . (2)
- b) i) Define amplitude of a wave.
ii) Write the relation between time period and the frequency of a wave. (2)
- c) Copy the diagram given below and draw its reflected ray. Also find the
i) angle of reflection .
ii) angle between incident ray and the reflected ray . (2)



- d) i) Name the instrument with which a person can see around corners other obstructions.
ii) State its principle .
- e) i) What is lateral inversion ?
ii) The distance between the image of an object and plane mirror is 18 cm. Find the distance between image and object.

QUESTION -3

- a) i) Define heat.
ii) State its SI unit.
- b) i) Flammable substances should be handled with great care .Give reason
ii) What is thermal expansion?
- c) Differentiate between flammable and non-flammable substances.
- d) i) Define temperature .
ii) State its SI unit .
- e) i) Convert 54°C into kelvin scale .
ii) Write the relation between calorie and SI unit of energy .

QUESTION -4

- a) i) Name the kind of heat transfer in solids.
ii) Define it .
- b) Cooking utensils are made of copper but their handles are made of wood.
Give reason for both .
- c) i) What is ignition temperature?
ii) Name the kind of heat transfer which does not require a material medium.
- d) Hot water pipes and radiators of cars are painted black. Give reason.
- e) State any two conditions for conduction of heat .

SECTION -II (40 Marks)
(Answer all questions)

QUESTION -5

- a) i) Name the different forms of mechanical energy .
ii) Define them . (3)
- b) i) State the law of conservation of energy .
ii) What is echo ?
iii) State one condition for an echo to be heard clearly . (3)
- c) State the characteristics of image formed by a plane mirror . (4)

QUESTION -6

- a) i) Define reflection of light.
ii) State the laws of reflection. (3)
- b) Define i)Oscillation ii)Wavelength iii)Time Period. (3)
- c) i) Name the secondary colours.
ii) Which all primary colours have to be combined to get the above mentioned secondary colours? (4)

QUESTION -7

- a) Convert i) 35°C into $^{\circ}\text{F}$
ii) -39°F into $^{\circ}\text{C}$ (3)
- b) State any three factors on which the amount of heat radiated from a body depends. (3)
- c) i) What is a thermos flask?
ii) How can the heat losses be reduced? (4)

QUESTION -8

- a) i) What is a sound?
ii) How is it produced?
iii) Can it propagate in vacuum? (3)
- b) i) What is a SONAR?
ii) State its principle.
iii) Give one use of it. (3)
- c) Name and define the characteristics of sound. (4)