



Al Sharq Bright International School
Model Paper for Mid Term Exam 2017-2018

Name: _____ Subject: Physics Class: 9 ___ Date: _____

Paper – 1

A. Multiple Choice Questions:

1. Which line in the table correctly describes whether the molecules of a solid, liquid and gas are moving or stationary?

	Solid	Liquid	Gas
A	Stationary	Stationary	Stationary
B	Stationary	Stationary	Moving
C	Stationary	Moving	Moving
D	Moving	Moving	Moving

2. How does heat from the Sun reach the Earth?

- a) Conduction only
- b) Convection only
- c) Radiation only
- d) Conduction, convection and radiation

3. A measured mass of gas is placed in a cylinder at atmospheric pressure and is then slowly compressed.

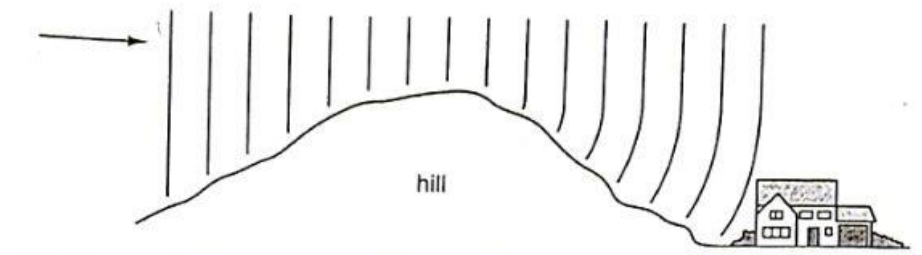


The temperature of the gas does not change.

What happens to the pressure of the gas?

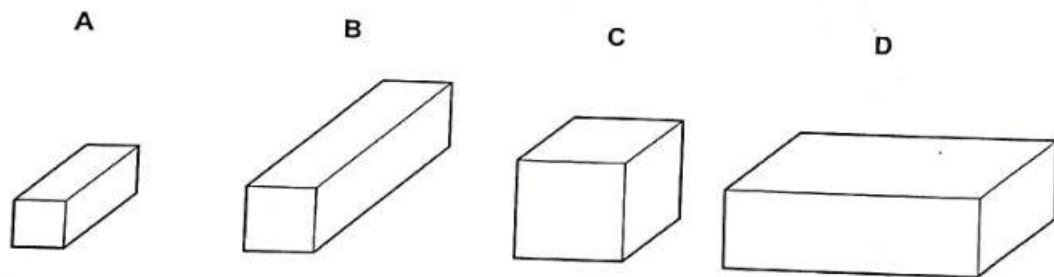
- a) It drops to zero.
- b) It decreases, but not to zero.
- c) It stays the same.
- d) It increases.

4. Radio waves are received at a house at the bottom of a hill.



The waves reach the house because the hill has caused them to be

- a) Diffracted
 - b) Radiated
 - c) Reflected
 - d) Refracted
5. The diagrams show four blocks of steel. The blocks are all drawn to the same scale. The same quantity of thermal energy (heat) is given to each block. Which block shows the greatest rise in temperature?



Paper – 3

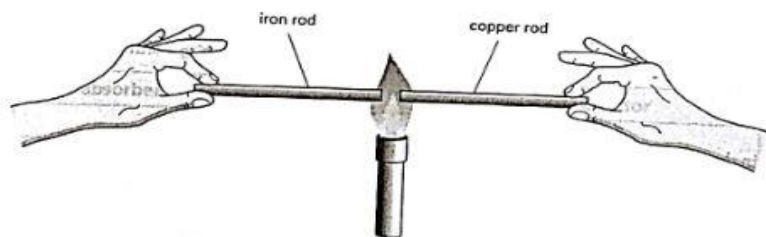
B. Answer the following questions:

1. Write a brief explanation of convection, using the terms expansion, density and gravity.
2. The specific heat capacity of steel is $420 \text{ J/(kg degree C)}$. How much energy is required to heat 7 kg of steel by 30 degree C ?
3. State Boyle's law with equation.
4. A container holds 40 m^3 of air at a pressure of 140000 Pa . If the pressure is increased to 180000 Pa , what will the volume of the gas become? Assume that its temperature remains constant.
5. Draw a diagram to show the three states of matter and the changes between them.

Paper – 6

C. Alternative to Practical:

1. a) (i) Name the process by which thermal energy is transferred through a metal rod.
(ii) Describe how this process occurs.
b) An iron rod and a copper rod of equal length are each held by hand at one end, with the other end in the flame from a Bunsen burner, as shown in the diagram.



The copper rod becomes too hot to hold much sooner than the iron rod. What does this information tell you about iron and copper?

Note: This is just a model not the exam paper.