

GREENLAWNS HIGH SCHOOL
FINAL EXAMINATION YEAR 2018

SUBJECT : PHYSICS
TIME : 1 ½ HRS

CLASS : VIII
MARKS : 80

NOTE: You will not be allowed to write during the first 10 minutes. This time is to be spent in reading the question paper. The time given at the head of this paper is the time allowed for writing the answers.

Attempt all questions from Section A & Section B. Each section is of 40 marks. Show the necessary steps in numericals.

Section A (40 marks)

Attempt all questions from this section.

Q.1. Name the following:

[10]

1. A device which is used to detect the presence & nature of charge on a body.
2. Another name for live wire.
3. The capacity of body to do work.
4. The commercial unit of electrical energy.
5. The force of the liquid acting vertically upwards.
6. The ratio of speed of light in one medium to speed of light in another medium.
7. The normal force acting on a surface of unit area.
8. The phenomenon that occurs when a live wire & a neutral wire come in contact due to poor insulation.
9. A device which measures the amount of electric energy consumed by the consumer for which the electricity bill is paid by him to the electricity board.
10. The cgs unit of moment of force.

Q.2. A) State whether the following statements are true or false. If false correct the statement.

[4]

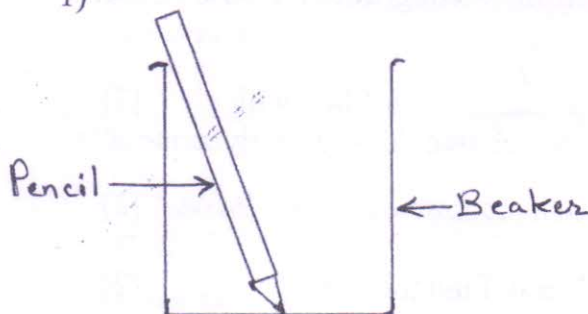
1. No medium can have a refractive index less than one.
2. An insulator can not be charged by conduction.
3. The buoyant force exerted by a liquid on the object immersed in it is less if the density of liquid is more.

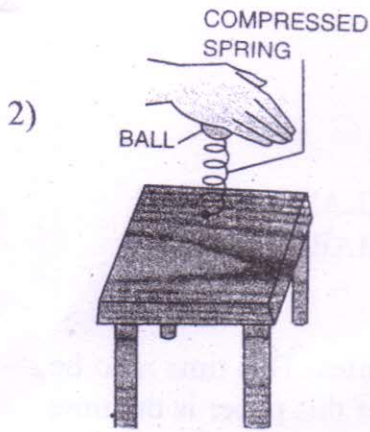
B) Write what will happen in each of the following cases & why?

(6)

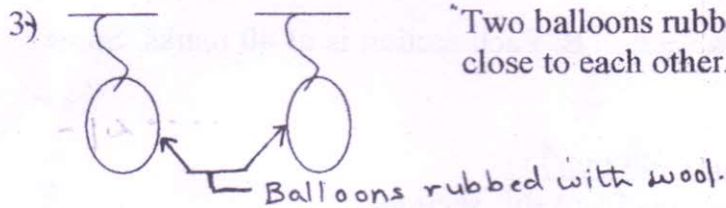
1)

If water is poured in the beaker upto its brim
Write your observation with respect to
appearance of the pencil.





If a ball is placed on a compressed spring & the spring is released



Two balloons rubbed with wool are brought close to each other.

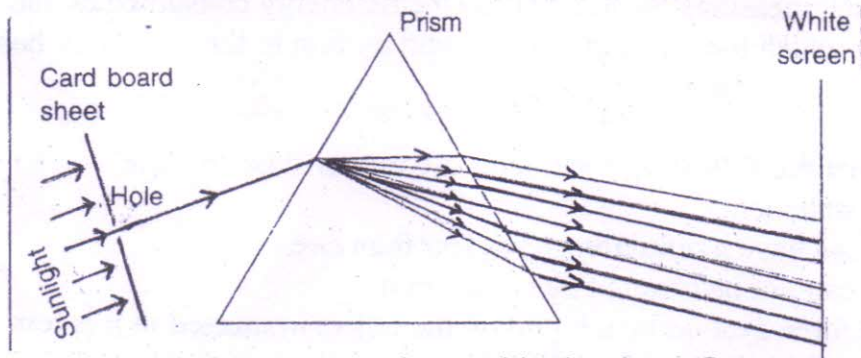
Q.3. A) Define [7]

- | | | |
|----------------------|-----------------------|--------------------------|
| i) Current | ii) Mechanical energy | iii) Thrust |
| iv) Relative density | v) Moment of force | vi) Refraction of light. |

B) Distinguish between the following pairs on the basis of what is given in the brackets. [3]

- i) Pressure – Thrust (SI unit)
- ii) Neutral wire – Earth wire (colour)
- iii) Work – Power (meaning)

Q.4. A) Observe the diagram given below & answer the questions that follow: [4]



- i. Name the phenomenon observed in the above figure.
- ii. What happens in the phenomenon mentioned by you in Q 4 A) i
- iii. Write the cause of the phenomenon.
- iv. Give the order of the colours in the spectrum starting from the base of the prism.

B) 1) The mass of a density bottle is 28g when empty, 58.3g when filled with glycerine & 52g when filled with water. Find the relative density of glycerine. [2]

2) What is the magnitude of force required to produce a pressure of 22500 Pa on an area of 500 cm²? [2]

3) An electric heater of power 1.8 kW is used for 1.5 min. Find the energy supplied by the heater. [2]

Section II (40 Marks)

Q.5. A) State the law of floatation. What is the apparent weight of a floating body – greater than the weight of the liquid, less than the weight of the liquid, equals to the weight of the liquid or zero? [2]

B) When the energy used by a refrigerator is 220J in one second & the potential difference across the circuit is 150V, then power rating of the refrigerator is said be 150W, 220V. Do you agree with the above statement? Justify your answer. [2]

C) Draw a neat labelled diagram of a gold leaf electroscope. [3]

D) Write any 3 safety measures to be taken during lightning. [3]

Q.6. A) It is easier to swim in sea water than in river water. Explain the reason. [2]

B) Calculate the moment of force of 3.5N applied on a body at a distance of 25 cm from a pivoted point. [2]

C) Name two methods of charging a conductor. [2]

D) How are the electrical appliances connected in a house circuit – in series or in parallel? Give two reasons for your answer. [3]

E) In the morning the sun is seen in advance, a few minutes before it rises above the horizon. Name the scientific phenomenon responsible for this. [1]

Q.7. A) Give scientific reasons. [8]

1. Army tanks are made to move over the broad steel tracks.
2. Hammer drives a nail into the wood only when lifted & then struck.
3. The ordinary copper wire should not be used as a fuse wire.
4. A spanner used to tighten or loosen a nut has a long handle.

B) The relative density of silver is 10.3 then find its density in
i) CGS system ii) SI system. [2]

Q.8. A) Icebergs floating on the sea water are dangerous for the ships. Explain. [3]

B) State two effects of force when applied on a body. [2]

C) A body of mass 80 kg is moving with a speed of 180 kmhr^{-1} . Find its kinetic energy. [2]

D) Complete the table given below. Do not copy the table. Write your answers as
i- , ii- , iii- & so on [3]

	Charge on gold leaf electroscope	Divergence of gold leaves	Nature of the charge on body
1	positive	decreases	<u> i </u>
2	No charge	leaves diverge	<u> ii </u>
3	Negative	<u> iii </u>	Negative