

**GREENLAWNS HIGH SCHOOL**  
**TERMINAL EXAMINATION 2021**

**SUBJECT: PHYSICS**  
**TIME: 1 HOUR**

**STD: IX**  
**MARKS: 40**

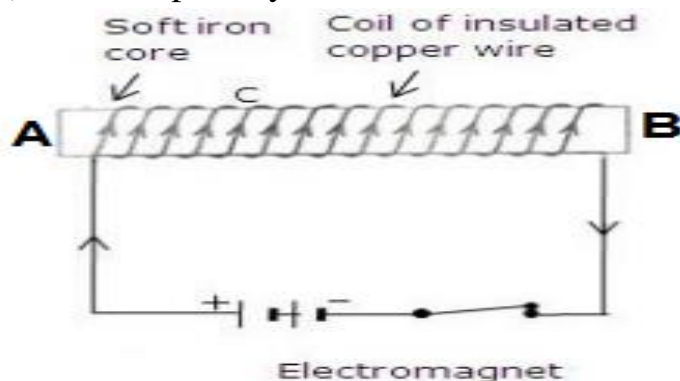
---

**Note:**

- All answers to this paper must be written on composition sheet.
- You will not be allowed to write during the first 10 minutes. Use this time to read the paper carefully.
- The time given at the head of this paper is the time allowed for writing the answers.
- Write your *Name, Roll no., Class-Div.* and *Page number* in the right hand side top corner of every side of your composition sheet.
- After you finish your paper, click a clear photo of each page of your answer sheet, convert all the images into a **ONE PDF** and rename it as follows: *Roll No., Name, Class-Div. and Physics Final Exam.* And upload it on teams under given assignment.

**Question 1** **(10)**

- 1) i) Why electromagnet is called as a temporary magnet? (3)  
ii) State two ways to increase the strength of an electromagnet.
- 2) i) State whether true or false, if false correct the statement: (3)  
Magnetic field lines of Earth are always directed from geographic north to geographic south.  
ii) Why do magnetic field lines never intersect each other?  
iii) State the position of neutral point, when two magnets are separated in one line with their like poles facing each other .
- 3) State the polarity at the ends A and B for the following electromagnet. (2)

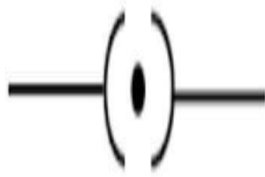


- 4) How is the resistance of a conductor change if its- (2)  
i) Length is increased      ii) Area is decreased

**Question 2****(10)**

1) Identify and name the symbols given below. (Do not copy the symbols) (3)

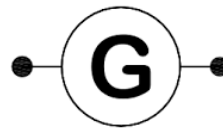
i)



ii)



iii)



2) i) State the S.I. unit of charge. (3)

ii) A bulb draws current of 2.5 A at 10.0 V. Find the resistance of the filament of bulb while glowing.

3) Give scientific reasons for the following – (4)

i) During thunder and lightning, light is seen much earlier than the sound of thunder is heard.

ii) A person living near the railway track often presses his ear against the steel rail to guess whether train is coming or not.

iii) Bats use ultrasound.

iv) Astronauts on moon cannot hear each other directly.

**Question 3****(10)**

1) Draw a ray diagram to show the formation of virtual and magnified image.

Choose the appropriate mirror and position of an object to show this image formation. (3)

2) Identify whether the velocity in the following examples will be uniform velocity or non-uniform velocity. (3)

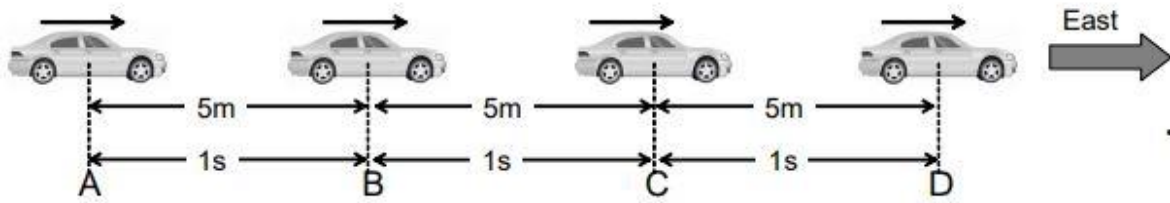
i)



ii)



iii)

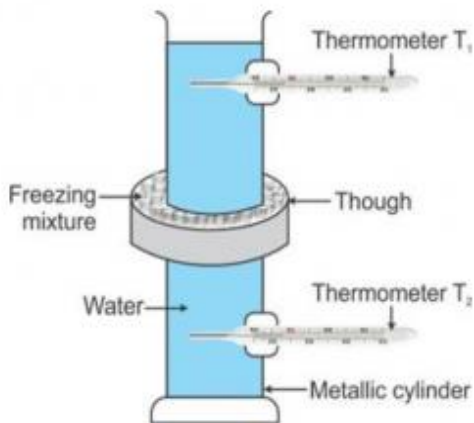


3) An object is placed 7 cm in front of a concave mirror of radius of curvature 28 cm. Find the - (4)

- i) Position of an image.
- ii) Linear magnification

**Question 4** (10)

1) The following questions are based on the Hope's experiment, initially both the thermometers  $T_1$  and  $T_2$  show room temperature. (3)



- i) Which thermometer will record the decrease in temperature first?
- ii) What is the lowest temperature recorded by thermometer  $T_2$ ?
- iii) Give reason for your above answer.

2) Name the process used for producing electricity using the nuclear energy. (3)  
State one advantage and one disadvantage of using nuclear energy for producing electricity.

3) Differentiate between the following: (4)

- i) Transverse wave and Longitudinal wave (2 Points)
- ii) Distance and Displacement (2 Points)

-----