Focus Area Based

Test - 07E

SSLC Top Test Series

Physics

Time : 45 Mnts

Std. 10

Type - A (Chap. 1, 2, 3, 4)

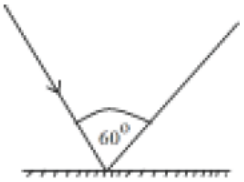
Score : 20

Instructions :

- The first 7 minutes is cool - off time
- This time is to be spent for reading the questions paper
- You are not supposed to write anything during the cool - off time
- Read the instructions carefully and attempt the questions

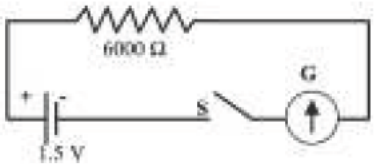
Answer any three questions from 1 to 4. One score each

1) What do you mean by 1 volt
2) State the right hand thumb rule
3) Write down two factors affecting the induced emf in electromagnetic induction
4) Incident ray and reflected ray are shown in the figure. Find the angle of incidence



Answer any four questions from 5 to 9. Two score each

5) Find the heat generated when 2 A current flows through a 100 Ω resistor for 5 minute.
6) You know that a current carrying will deflect in a magnetic field. Mention 2 methods to make the deflection in the opposite direction.
7) Observe the figure



   a) What do you know about the deflection of the galvanometer needle.
   b) Why?
8) 60° is the angle between two plane mirrors. Find the number of images formed when an object is placed in between.
9) What is the energy change in a bulb when it works?

Answer all questions from 10 to 12. Three score each

10) Find the focal length of a mirror if it gives a real image at a distance 10 cm on placing an object 15 cm away.
11) Describe the working of a transformer
12) Write down three salient features on connecting resistors in series .

Type - B

Answer any three questions from 1 to 4. One score each

1) Write down two factors affecting the heat developed by a current carrying conductor
2) Write down an example for a temporary magnet.
3) Draw the graphic representation of emf from a battery.
4) Name the device that coverts mechanical energy into electrical energy

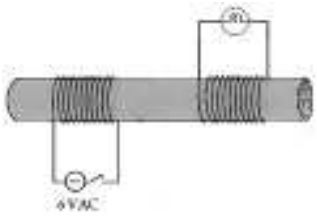
Answer any four questions from 5 to 9. Two score each

5) What is the current drawn by 60 W, 240 V?
6) Write down 2 salient features of an electromagnet.
7) Complete the given table properly by selecting the correct terms.

The angle through which armature turns	Current	emf
90 ^{0}	Maximum/zero	Positive/negative
270 ^{0}	Maximum/zero	Positive/negative

(P.T.O.)

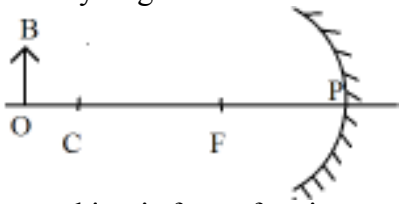
8) a) What do you see at the instant of switching on?
b) What if kept switched on?



9) Write down two advantages of nichrome

Answer all questions from 10 to 12. Three score each

10) Complete the ray diagram and write the nature of image and its size.



11) On placing an object in front of a mirror at distance 90 cm from the mirror an image is obtained on a screen 60 cm away from the mirror. Calculate its focal length

12) Will a transformer work in DC? Why?

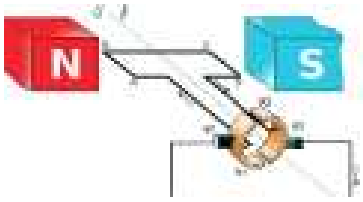
Type - C

Answer any three questions from 1 to 4. One score each

1) What do you mean by joule heating?
2) The current flows in the clockwise direction at one end of a solenoid. What is the polarity at that end?
3) In any transformer, Ns/Np = ...
4) On placing an object in front of a mirror the image is formed at that place itself. Which type of mirror is it?

Answer any four questions from 5 to 9. Two score each

5) What are the cares to be taken while connecting a fuse wire?
6) Observe the figure and write down the names of the following parts

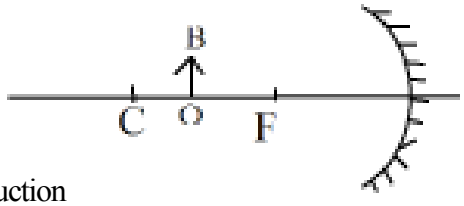


a) ABCD b) N c) B1 and B2 d) R1 and R2

7) Write down two uses of a concave mirror
8) On passing current through a solenoid it becomes an electromagnet. What are the methods to increase its strength?
9) Write down two reasons for improving the strength of an electromagnet

Answer all questions from 10 to 12. Three score each

10) Complete the ray diagram and write down the size and nature of the image



11) a) Define mutual induction
b) Write down the name of a device that works on this principle
c) Wll the device work in DC?

12) 400 V is applied across a 200 ohm resistor for 10 minute. Find the heat developed

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Focus Area Based

SSLC Top Test Series

Physics

Test - 17E

Std. 10

Type - A (Chap. 5 to 7)

Time : 45 Mnts
Score : 20

Instructions :

- The first 7 minutes is cool - off time
- This time is to be spent for reading the questions paper
- You are not supposed to write anything during the cool - off time
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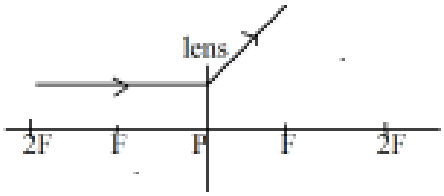
Answer any three questions from 1 to 4. One score each

1) What happens to the speed of light when the optical density of the medium increases?
2) What do you mean by the optic centre of a lens?
3) On placing an object in front of which lens is the size of the object same as that of the image?
4) Which phenomenon of light causes rainbow?

Answer any four questions from 5 to 9. Two score each

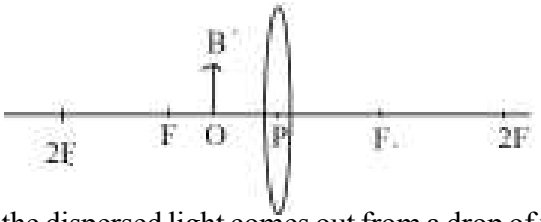
5) Name the products that you get on distilling coal.
6) a) Which type of lens is shown in the figure?
   b) What is the nature of the image given by this type of lens?



7) a) What do you see on rotating Newton's colour disc faster?
   b) Define the phenomenon behind the observation.
8) Explain the relation between wavelength and scattering of light.
9) What are things that you should do if gas leak is ensured (4 things)

Answer all questions from 10 to 12. Three score each

10) Complete the ray diagram and write down the nature and size of the image.



11) When the dispersed light comes out from a drop of water
   a) What is the colour at the lower end?
   b) In rainbow what is the colour at the lower end?
   c) What is the actual shape of the rainbow?
12) Find out a definition for the following
   a) Refraction
   b) Scattering
   c) Energy crisis

Type - B

Answer any three questions from 1 to 4. One score each

1) What do you mean by magnification?
2) Which is the lens that virtual images alone?
3) What is the full form of CNG?
4) How many types of fossil fuels are there?

Answer any four questions from 5 to 9. Two score each

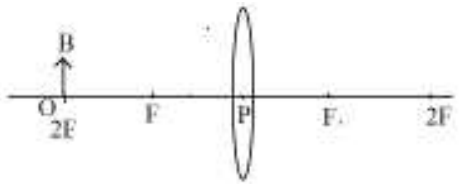
5) Write down two instances in which the total internal reflection is made us of

(P.T.O.)

6) When is a concave lens giving a virtual image?
What do you know about the size of the image at that instance?
7) Which colour comes near the base of a prism during when white light passes through a prism? Name the phenomenon behind the process.
8) How can you make an artificial rainbow?
9) Write down two reasons for energy crisis

Answer all questions from 10 to 12. Three score each

10) a) What do you mean by green energy?
b) Give 4 examples
11) Complete the ray diagram and write down the size and nature of image



12) Find out a definition for the following
a) centre of curvature of a lens
b) principal focus of a convex lens
c) optic centre

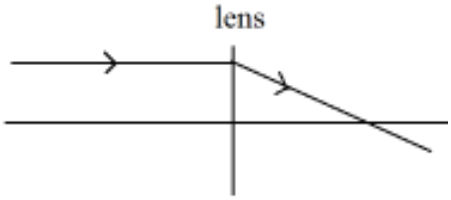
Type - C

Answer any three questions from 1 to 4. One score each

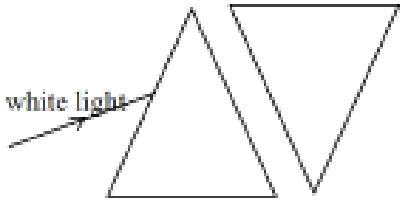
1) Write down the names of two types of fossil fuels
2) What happens to the speed of light with increase in the optical density?
3) Name the main component in C N G
4) What do you mean by spectrum?

Answer any four questions from 5 to 9. Two score each

5) a) What is total internal reflection?
b) What is the condition for it?
6) a) Which type of lens is depicted ?
b) When will this lens give an image having the same size as that of the object?



7) Complete the diagram



8) a) What do you mean by persistence of vision?
b) Give an example
9) During dispersion which colour deviates most? Why?

Answer all questions from 10 to 12. Three score each

10) Explain how rainbow is formed
11) a) What do you mean by nuclear energy?
b) Write down 4 examples
12) Write down 3 methods to minimise energy crisis