

Second Mid Term Evaluation

KP (G)
Std. 10

Physics

Time : 45 mts.

Score : 20

Answer any 2 questions from 1 to 3. Each question carries 1 score each. (2 x 1 = 2)

1. How many images are formed when two plane mirrors are arranged at an angle of 120° ?

(4, 3, 2, 1)

2. The voltage of emf produced in the power Stations is (230V, 11000 V, 200 V, 400 V)

3. If the object distance and image distance in a concave mirror is 20 cm, find the focal length.

Answer any 2 questions from 4 to 6. Each question carries 2 score each. (2 x 2 = 4)

4. Classify the following relations in to those associated with the step up and step down transformers.

a. $V_s < V_p$ b. $V_p < V_s$

c. $N_s/N_p > 1$ d. $N_s/N_p < 1$

5. a) What is meant by magnification of a mirror ?

- b) Which mirror always give a positive magnification less than 1?

6. a) Write the name of a device used to measure electrical energy?

b) Which is the commercial unit of electrical energy?

Answer any 2 questions from 7 to 9. Each question carries 3 score each. (2x 3 =6)

7. A transformer without power loss has 500 turns in its primary coil and 2500 turns in the secondary coil.

It induces a potential difference of 250 V and 0.2 A in the secondary.

a) Name the type of transformer.

b) Find the voltage in the primary coil.

c) What is the intensity of current in the primary coil?

8. An object is placed 30 cm away from a concave mirror. An image is formed on a screen 20 cm away from the mirror.

a) Write the mirror equation

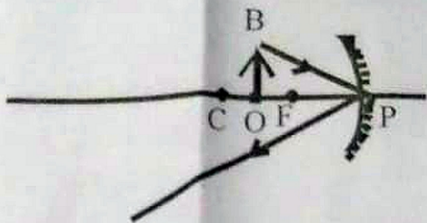
b) Write the distance from the mirror to the object and to the image using new Cartesian sign convention.

c) Calculate the focal length of the mirror.

9) In a house, 5 CF lamps each of 20 W, works for 4 hours, 4 fans each of 60 W work for 5 hours and a TV of 100 W works for 4 hours in a day. Find the electrical energy used in one day.

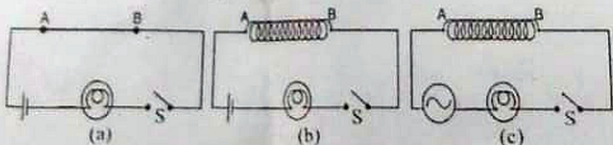
Answer any 2 questions from 10 to 12. Each question carries 4 score each. (2x 4 = 8)

10. An object is placed in between the points F and C of a concave mirror as shown.



- Locate the position of the image by drawing another ray.
- Write any two characteristics of the image formed.

11. Three circuits are given.



- When all the circuits are switched on, which bulb glows with minimum intensity?
- What is the reason for decrease in the intensity of light of that bulb?
- Name this phenomenon.
- Is there any difference in intensity between bulbs a and b? Why?

12. Electric shock may lead to death.
- a) Write any two precautions to be taken to avoid electric shock.
 - b) Write any two first aids to be done in the case of getting electric shock.