

Instructions

- Total score in the question paper is 30. Answers of best written questions / sub questions, for 20 score, are evaluated.

Question number 1 to 5 (1 score for each question)

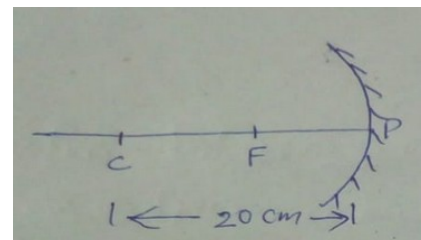
- 1) Which of the given device produce electricity?
(Ammeter, Motor, Transformer, Generator)
- 2) What is the voltage at which electricity is generated in our country?
- 3) Magnification of a convex mirror is always.....?
(+1, -1, greater than one, less than one)
- 4) Correct the statement related to electric power transmission.

Current and loss of energy in the form of heat is decreased, when electric power is transmitted at low voltage.

5) Moving coil loud speaker works with motor principle. What is the working principle of moving coil microphone?

Question number 6 to 9 (2 score for each question)

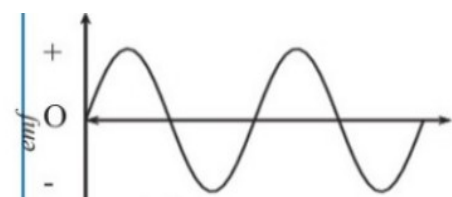
- 6) Observe the figure and answer the questions?
 - a) What is the focal length of this mirror?
 - b) Write two features of the image, if an object is placed at a distance of 5 cm from the mirror?



- 7) Select the correct statements related to the step up transformer?
 - a) **Current in the primary and secondary are equal.**
 - b) **Power in the primary and secondary are equal.**
 - c) **Primary current is less than secondary current.**
 - d) **Primary current is greater than secondary current.**

8) Graphical representation of emf obtained from a device is given.

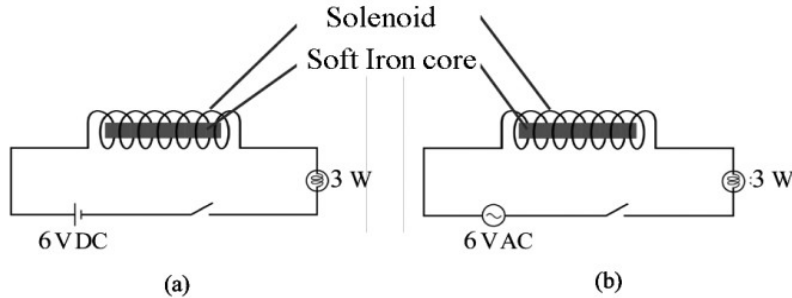
- a) Name the device?
- b) State the working principle of this device?



9) Write two first aids given to a person, who gets an electric shock?

Question number 10 to 12 (3 score for each question)

10) Observe the given electric circuits and answer the following questions. Similar bulbs are connected on both circuits.



a) In which circuit, the intensity of light from the bulb is less?

b) Suggest a method for increasing, the phenomenon which causes the decrease in the intensity of light, in the above circuit?

c) Write the name of a device, which has this phenomenon as working principle?

11) Arrange the column A, B and C suitably.

A	B	C
Plane mirror	Converges the light rays from a distant object, to a point.	Used as rear view mirror
Concave mirror	Image is always diminished, virtual and erect.	For observing the face.
Convex mirror	Image is always virtual, erect and same size as that of the object	Used in solar furnace.

12) a) Complete the table by using the given statements.

i) Slip rings are used.

ii) Split rings are used.

iii) AC is produced on the armature and DC in the external circuit.

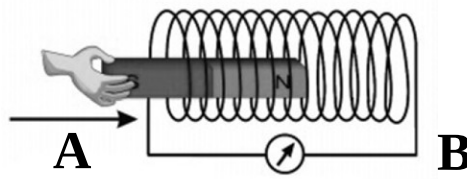
iv) AC is produced on the armature and external circuit.

AC Generator	DC Generator

b) Write the energy change taking place in a generator?

Question number 13 to 14 (4 score for each question)

13) (i) Electric current is produced in the circuit, when an experiment is setup as shown in the figure. Complete the table.



Activity	Observation
North pole of the magnet is moved into the solenoid from the side A.	Galvanometer needle deflected towards the right.
Magnet is stationary inside the solenoid. (a).....
North pole of the magnet is moved out of the solenoid through the side A. (b).....
North pole of the magnet is moved into the solenoid from the side B. (c).....
North pole of the magnet is moved out of the solenoid through the side B.(d).....

(ii) Give two suggestions, for increasing the current produced in the above experiment?

14) An object of height 10 cm is placed at a distance of 20 cm from a concave mirror. A real image is formed at a distance of 30 cm from the mirror.

- a) Find the magnification?
- b) What is the height of the image?
- c) Find the focal length of the mirror?