

Short Answer Questions

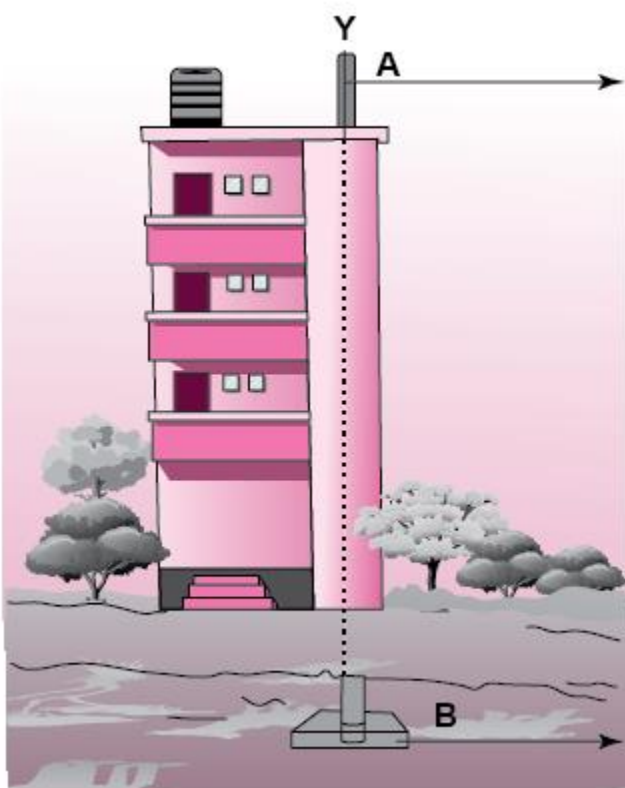
Q. 1. During the construction of a building the lightning conductor was left hanging in the air by mistake. Would the lightning conductor be still effective? Explain.

Ans. No, it will not be effective. Since lightning conductor was not connected properly to the earth, therefore, the charge will not pass through to the earth.

Q. 2. If air and cloud were good conductors of electricity, do you think lightning could occur? Explain. [NCERT Exemplar]

Ans. No, it will not occur. The charge separation cannot take place in conductors. Therefore, charges will not accumulate on clouds and so lightning cannot take place.

Q. 3. Identify the lightning conductor and the copper plate in the figure given below. [NCERT Exemplar]



Ans. A is the lightning conductor and B is the copper plate.

Q. 4. If the materials used for constructing a building were good conductors, do you think lightning will strike the building? Will the lightning conductor be still required to be installed in the building? [NCERT Exemplar]

Ans. No. There is no need to install lightning conductor in the building.

Q. 5. You might have observed on a dry day that when you touch the screen of a television or computer monitor (with picture tube), you get a slight shock. Why does it happen?
[NCERT Exemplar]

Ans. Electric charge gets accumulated on the screen. On touching the screen the charge discharges through our body. Thus, we get a slight shock.

Q. 6. Explain how does lightning conductor protects a building from getting struck by lightning.
[NCERT Exemplar]

Ans. Lightning conductor does not allow the charge to accumulate on a building as it conducts the charge to the earth, protecting building from being struck by lightning.

Q. 7. In an electroscope if a negatively charged body is brought in contact with the metal clip, the strips of the electroscope diverge. If now another charged object carrying equal amount of positive charge is brought in contact with the clip, what will happen?
[NCERT Exemplar]

Ans. If a positively charged object is brought in contact with the clip of an electroscope, the negative charge given earlier will be neutralised and the strips will collapse.

Q. 8. The strips of an electroscope diverge when a charged body is brought in contact with the metal clip. Now the clip is touched gently by our hand. What will happen to the strips? Explain.
[NCERT Exemplar]

Ans. The charge that was in the electroscope strips will get discharged through our hand. The strips will come back to the original state.

Q. 9. Explain why it is safer to use a wireless telephone instead of a landline telephone during lightning.
[NCERT Exemplar]

Ans. Lightning is an electrical discharge. During lightning atmospheric electric charge may discharge through landline telephone wires and may become dangerous. Therefore it is safer to use a wireless telephone instead of a landline telephone during lightning.