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Some Natural Phenomena

ORAL QUESTIONS

A. Answer these questions orally.

1. Who conducted the famous kite and key experiment in 1752?
2. What are the two kinds of charges present in the atoms of all material?
3. What are the negatively charged particles present in the outer part of atoms called?
4. Is human body a good or a bad conductor of electricity?
5. Name the device used to detect charge on a body.

B. Fill in the blanks.

1. The earthquakes of magnitude _____ or above on Richter scale are fatal in nature.
2. _____ currents in mantle bring huge masses of molten material to molten.
3. The place where two land masses join is called a _____.
4. Like charges _____ each other while unlike charges _____ each other.

PUZZLE/QUIZ

C. Find atleast eight terms that are related to Natural Phenomena.

E	A	R	T	H	Q	U	A	K	E
P	E	A	Z	A	R	W	U	L	F
I	A	L	Q	B	P	E	E	I	A
C	R	B	E	N	R	I	R	G	U
E	T	D	R	C	O	O	P	H	L
N	H	M	A	N	T	L	E	T	T
T	I	R	I	M	O	R	T	N	Z
R	N	C	O	Y	N	T	O	I	O
E	G	N	L	E	J	Q	X	N	N
U	P	Q	Y	O	L	P	M	G	E

CLASS TEST

D. MCQ– Tick (✓) the correct option.

1. Which of the following statement is incorrect?
   (a) The magnitude of an earthquake is measured on Richter scale. ☐
   (b) Objects cannot be charged by rubbing. ☐
   (c) Charges can flow through metals. ☐
   (d) A seismograph can detect and study seismic waves. ☐
2. Which of these statements is incorrect for a lightning conductor?
   (a) In consists of a long metal rod. ☐
   (b) The lower end of the rod is fragmented into larger number of pointed ends. ☐
   (c) The lower end of the rod runs deep under the earth. ☐
   (d) Benjamin Franklin designed the lightning conductor. ☐
3. A device which is used to detect the presence of charge on an object is called
   (a) Seismograph ☐ (b) Electroscope ☐
   (c) Periscope ☐ (d) Microscope ☐
4. The earthquake of magnitude between _____ can be destructive
   (a) 3.5 — 6 ☐ (b) 3.5 — 5.4 ☐
   (c) 3.5 — 6.9 ☐ (d) 6.1 — 8.0 ☐
5. This layer of earth has largest temperature
   (a) Outer core ☐ (b) Inner core ☐
   (c) Outer mantle ☐ (d) Lower mantle ☐

E. Very short answer questions.

1. What is an earthquake?

   _____

2. What is lightning?

   _____

3. What is an electroscope?

   _____

4. What do you understand by a lightning conductor?

5. What is a seismograph?

6. What charge is acquired by the material which gains electrons?

7. What is the charge acquired by the glass rod if it is rubbed with a silk cloth?

8. What is the charge acquired by the silk cloth when it is rubbed with a glass rod?

9. What do you understand by electric current?

10. What is earthing?

11. What do you understand by a plate joint?

12. What do you understand by tremors?

F. Short answers questions.

1. What happens when two objects are rubbed against each other?

2. When do charges flow?

3. What happens when two charged objects, with charges of different levels, are brought in direct contact or through a metallic conductor?

4. What is the advantage of fitting a lightning conductor on top of a building?

5. How is an earthquake caused?

6. Name the places in India which are most likely to suffer earthquake any time.

7. What does Richter scale measure?

8. What do you understand by Quake Safe Buildings?

9. 'Drop, Cover and Hold on' is the protocol to protect lives during an earthquake. What does the statement mean?

G. Long answer questions.

1. How is lightning and thunder caused? Explain with the help of a diagram.

2. What safety measures should you follow if you are indoors when a lightning strikes?

3. What safety measures should you follow if you are outdoor when a lightning strikes.

4. What are the two ways in which the pressure develops under the crust?

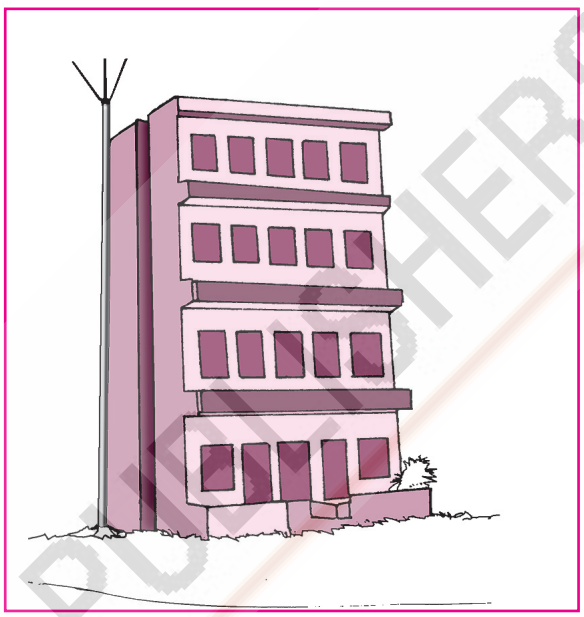
5. Explain the construction and working of an electroscope.

6. What aspects must be taken care of while making quake safe buildings?

HOME ASSIGNMENT

H. Think and answer.

1. Akshay noticed a device with large number of pointed ends attached above the top of a building.



   (a) What could this device be?

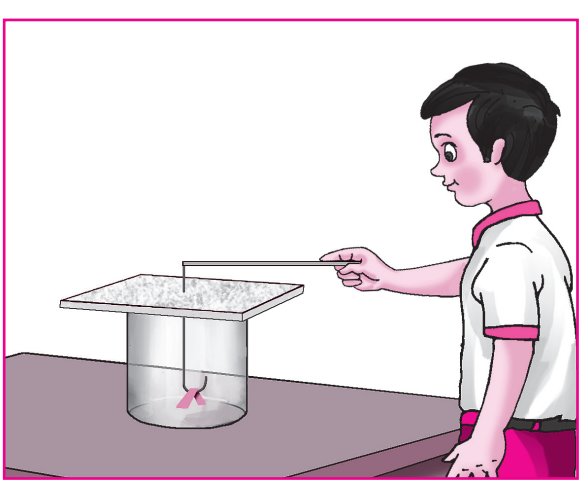
   (b) What does this device consist of?

   (c) Why is the upper end of the rod made into the shape of a *trishul*?

   (d) Where is the lower end of the rod fitted?

2. (a) Suraj rubbed a plastic straw and quickly touched its rubbed end to the upper end of the metal wire in an electroscope. What will he observe in the copper strips?

   (b) He then removed the straw and touched the upper end of the metal wire with his hand. What change will he observe in the copper strips now?



(c) He charged the plastic straw again and touched it to the upper free end of the metal wire. What change will he observe in the copper strips now?

WORKSHEET

I. Give reasons for the following.

1. Huge convection currents are set in the mantle layer of the earth.

2. During lightning we should not stand under a tree for cover.

3. All heavy electrical appliances are compulsory earthed.