



PHYSICS

BOOKS - LAKHMIR SINGH & MANJIT KAUR

SOME NATURAL PHENOMEAN

Exercise

1. What are the two kinds of electric charges ?



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2. What kind of electric charge is acquired :
by a glass rod rubbed with silk cloth ?

A. Positive

B. Negative

C. Both A and B

D. None of these

Answer: A



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3. What kind of electric charge is acquired :
by a plastic comb rubbed with dry hair ?



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4. What type of electric charge is acquired by a
rubber ballon when rubbed with a woollen
cloth ?



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5. A negative charged object attracts another charge object placed near it. What is the nature of charge on the other object ?



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6. A positively charged object repels another charged object kept close to it. What is the nature of charge on the other object ?



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7. A negatively charged object repels another charged object held near it. What is the nature of charge on the other object ?



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8. A glass rod is rubbed with a silk cloth. What type of charge is acquired by silk cloth ?



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9. A glass rod is rubbed with a silk cloth. What type of charge is acquired by glass rod ?



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10. An inflated rubber balloon and a woollen cloth are rubbed together. What type of charge is acquired by woollen cloth



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11. An inflated rubber balloon and a woollen cloth are rubbed together. What type of charge is acquired by rubber balloon ?



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12. Name the device to detect electric charge on a body.



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13. When an object is touched with the metal top of an electroscope, its aluminium leaves diverge. What conclusion do you get from this observation ?

- A. The object is charged
- B. The object is uncharged
- C. The objects is an insulator
- D. None of these

Answer: A



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14. What is the name given to those applications that combine text, sound, graphics, motion video, and/or animation?



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15. Why should a person not stand under a tree during a thunderstorm ?

A. Trees are insulators

B. Trees attract lightning

C. Lightning can strike trees and buildings

and further it can jump to humans easily

D. All of these

Answer: C



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16. Name the device which is used to protect a tall building from lightning.

A. Lightening conductor

B. Lightening modem

C. Lightening tank

D. None of the above

Answer: A



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17. What name is given to the phenomenon in which the earth shakes suddenly for a very short time ?

A. Lightning

B. Thunderstorm

C. Earthquake

D. Both A and B

Answer: C



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18. Name one destructive natural phenomenon which cannot be predicted in advance.



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19. List three states in India where earthquakes are more likely to occur.



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20. Name the instrument used to measure and record an earthquake.



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21. What was the magnitude of Bhuj and Kashmir earthquakes on the Richter Scale ?



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22. Name the scale on which the magnitude (or intensity) of an earthquake is expressed.



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23. For what purpose is Richter Scale used ?



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24. Name two events (other than earthquakes) which can cause tremors on the earth.



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25. In the context of an earthquake, which one is deep under the ground :focus or epicentre ?

A. Focus

B. Epicentre

C. Both A and B

D. None of these

Answer: A



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26. State whether the following statements are true or false :

Like charge attract each other.



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27. State whether the following statements are true or false :

A charged glass rod attracts a charged plastic straw.



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28. State whether the following statements are true or false :

Lightning conductor cannot protect a building from lightning.

A. True

B. False

C. Both A and B

D. None of these

Answer: B



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29. State whether the following statements are true or false :

Earthquakes can be predicted in a advance.

A. True

B. False

C. Both A and B

D. None of these

Answer: B



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30. State whether the following statements are true or false :

An earthquake of magnitude 2 on Richter

Scale is ten times as strong as an earthquake of magnitude 1 on the same Scale.



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31. State whether the following statements are true or false :

The plates of earth's crust are continuously moving.



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32. State whether the following statements are true or false :

An earthquake is measured and recorded by using an instrument called electrocardiograph.



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33. Fill in the following blanks with suitable words :

Like charges....., unlike charges.....





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34. Fill in the following blanks with suitable words :

Rubbing glass with silk makes
a.....charge on the glass.



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35. Fill in the following blanks with suitable words :

Combine your hair makes a.....charge on the comb.



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36. Fill in the following blanks with suitable words :

The negatively charged particles which are transferred from one object to another during charging by friction are called.....



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37. Fill in the following blanks with suitable words :

The charging on an object by rubbing another object is called charging by.....



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38. Fill in the following blanks with suitable words :

In an eletroscope, the aluminium leaves diverge because like charges.....



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39. Fill in the following blanks with suitable words :

.....is provided in buildings to protect us from electric shocks due to any leakage of electric current.



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40. Fill in the following blanks with suitable words :

Lightning is nothing but an.....spark.

A. Electric

B. Magnetic

C. Electrostatic

D. Chemical

Answer: A



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41. Why does a plastic comb rubbed with dry hair attract tiny pieces of paper ?



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42. How will you charge a glass rod by the method of friction ?



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43. How will you charge an onflated rubber balloon by the method of friction ?



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44. How will you charge a plastic comb (plastic scale or plastic pen) by the method of friction ?



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45. How will you charge a ballpoint pen refill by the method of friction ?



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46. Explain why, a charged body loses its charge when we touched it with our hand.



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47. What happens when the two plates of earth's crust moving in opposite directions slide past one another ?



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48. What happens when two moving plates of earth's crust collide head on with each other ?



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49. 100001 is a prime number or not ?



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50. Explain why , it might be dangerous to raise an umbrella over head in a thunderstorm.



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51. A person is in open space during a thunderstorm with no shelter (not even a tree) available nearby. Describe the safe position which he should take to protect himself from lightning. Why is this position considered safe ?



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52. Suggest three measures to protect ourselves from lightning.





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53. Where is the upper end of the lightning conductor fixed in a building ?



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54. Where is the lower end of the lightning conductor fixed and how ?



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55. What precautions would you take to protect yourself during an earthquake if you are inside the house ?



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56. What precautions would you take to protect yourself during an earthquake if you are outdoors ?



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57. State any two precautions which should be observed by people living in seismic zones for protection against earthquakes.



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58. What is an electroscope?



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59. What is lightning ?



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60. Why does lightning usually strike tall buildings ?



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61. Why Does Lightning Strike ?



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62. A pipe can fill a tank in 12 minutes. Another pipe can empty a tank in 20 minutes. They are opened in alternate minutes, How long will it take to fill the tank?



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63. Name the scientist who invented the lightning conductor.



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64. Why are lightning strike more frequent in hilly areas ?



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65. What is an earthquake ?



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66. What are two main situations in which earthquakes occur ?





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67. Define focus, of an earthquake.



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68. Define epicentre, of an earthquake



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69. What are the various effects of an earthquake ?



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70. Name the three layers of earth .



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71. Draw a labelled diagram to show the structure of earth.



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72. What is a seismograph ?



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73. Which of the following cannot be charged by friction, if held by hand ?

A. a plastic scale

B. a copper rod

C. an inflated balloon

D. a woollen cloth

Answer: A::C::D



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74. When a glass rod is rubbed with silk, it

A. the glass rod and silk cloth both acquire positive charge.

B. the glass rod becomes positively charged while the silk cloth has a negative charge.

C. the glass rod and silk cloth both acquire negative charge.

D. the glass rod becomes negatively charged while the silk cloth has a positive charge.

Answer: A::B::C::D



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75. Which of the following are transferred from one object to another when these two objects are charged by friction ?

A. atoms

B. protons

C. neutrons

D. electrons

Answer: D



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76. The electric nature of lightning was established by a scientist named :

- A. Isaac Newton
- B. Robert Hooke
- C. Benjamin Franklin
- D. Thales

Answer: C



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77. A plastic comb is rubbed with dry hair whereas a glass rod is rubbed with a piece of silk cloth. Which of these will get negatively charged ?

A. Plastic comb B. Glass rod C. Dry hair D. Silk cloth

A. A and B

B. B and C

C. A and D

D. B and D

Answer: A::D



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78. Earthquakes

- A. Celsius scale
- B. Kelvin scale
- C. Decible scale
- D. Richter scale

Answer: A::C



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79. An earthquake of magnitude 2 on richter scale is :

A. two times as strong as an earthquake of magnitude 1

B. four times as strong an earthquake of magnitude 1

C. ten times as strong an earthquake of magnitude 1

D. hundred times as strong as an
earthquake of magnitude 1

Answer: C



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80. The epicentre of an earthquake is :

A. deep under the crust of earth

B. in the mantle of earth

C. on the surface of earth

D. in the core of earth

Answer: A::C



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81. The waves generated by earthquake tremors are called :

A. ultrasonic waves

B. rhythmic waves

C. systemic waves

D. seismic waves

Answer: D



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82. When an object gets negatively charged by the process of friction, then :

A. the object loses some electrons

B. the object loses some protons

C. the object gains some electrons

D. the object gains some protons

Answer: C



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83. The device used of detecting charge (positive or negative) on an object is called :

A. stethoscope

B. telescope

C. kaleidoscope

D. electroscope

Answer: D



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84. A Charged object attracts an uncharged object by producing opposite charges in the nearer end of the uncharged object by the process of :

A. electric potential

B. electric induction

C. friction

D. electromagnetic induction

Answer: C::D



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85. A lightning conductor is a device which transfers :

A. electric energy

B. light energy

C. solar energy

D. photoelectric energy

Answer: C



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86. When a plastic comb is rubbed with dry hair, the hair get positively charged by friction.

In this porcess :

- A. the hair lose some positive protons
- B. the hair gain some positive protons
- C. the hair gain some negative electrons
- D. the hair gain some negative electrons

Answer: A



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87. Which of the following part of the earth is made up of molten iron ?

A. mantle

B. inner core

C. outer core

D. crust

Answer: C



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88. Which of the following area of India is the most threatened by earthquake ?

A. North-East

B. Kashmir

C. West Bengal

D. Rajasthan

Answer: A::B



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89. The place inside the earth's crust where the earthquake is generated is called :

- A. seismic zone of the earth
- B. epicentre of the earthquake
- C. fault zone of the earth
- D. focus of the earthquake

Answer: A::C



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90. An inflated rubber balloon is rubbed with a woollen cloth whereas a ballpoint pen refill is rubbed with a polythene bag. Which of these

will get positively charged ?

A.Inflated rubber ballon B.Woollen cloth

C.Ballpoint pen refill D.Polythene bag

A. A and B

B. B nad C

C. A and D

D. B and D

Answer: A::B::C::D



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91. Lightning can ever burn up tree. Lightning contains a tremendous amount of :

- A. heat energy
- B. electric energy
- C. chemical energy
- D. nuclear energy

Answer: C



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92. The tremendous electric charge in the atmosphere which produce sheet lightning in the clods produced by the process of :

- A. friction
- B. induction
- C. conduction
- D. convection

Answer: C



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93. Explain why, a charged balloon is repelled by another charged balloon whereas an uncharged balloon is attracted by a charged balloon.



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94. Explain why, a glass rod can be charged by rubbing when held by hand but an iron rod cannot be charged by rubbing, if held by hand.



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95. A glass rod is rubbed with a silk cloth and inflated rubber balloon is rubbed with a woollen cloth.

Now , out of glass rod, silk cloth, rubber balloon and woollen cloth :

which two objects acquire negative charge ?



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96. A glass rod is rubbed with a silk cloth and inflated rubber balloon is rubbed with a

woollen cloth.

Now , out of glass rod, silk cloth, rubber balloon and woollen cloth :

which two objects acquire positive charge ?



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97. What will you observe when the metal top of an electroscope is touched with :
a positively charged object ?



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98. What will you observe when the metal top of an electroscope is touched with :
a negatively charged object ?



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99. An earthquake measures 3 on Richter scale
:
Would it be recorded by a seismograph ?



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100. An earthquake measures 3 on Richter scale :

Is it likely to cause much damage ?



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