

NALANDA COLLEGE - COLOMBO 10

Unit Test

Grade 09

Science

Unit 17 – Lightning Accidents

Part I

❖ **Underline the most corrected answer.**

01. Not a type of lightning is,

- | | |
|-------------------------------|--------------------------------|
| (1). Cloud to air lightning | (3). Cloud to ground lightning |
| (2). Cloud to cloud lightning | (4). Air to air lightning |

02. A lightning strike that occur when using house hold electrical appliances.

- | | |
|-----------------------|---------------------|
| (1). Side flashes | (3). Step potential |
| (2). Contact voltages | (4). Direct strike |

03. This is the best place to protect yourself from lightning.

- | | | | |
|-------------------|-------------------|----------------|-------------------|
| (1). In the house | (2). In a vehicle | (3). On a tree | (4). Under a tree |
|-------------------|-------------------|----------------|-------------------|

04. The cause of lightning is given correctly,

- | | |
|--|---|
| (1). The formation of static electricity in clouds | (3). The presence of rainy weather |
| (2). Clouds act as a conductor | (4). Clouds contain small droplets of water |

05. Lightning that occurs between two charged clouds is,

- | | |
|--------------------------------|-------------------------------|
| (1). Cloud to ground lightning | (3). Cloud to air lightning |
| (2). Direct lightning | (4). Cloud to cloud lightning |

06. The best thing to do for protecting from lightning, if you are in an open place.

- (1). Climbing a tree
- (2). Going under a tree
- (3). Being in squatting position by keeping the feet close together
- (4). Being in a high land by keeping feet close together

07. What is the correct statement regarding lightning?

- (1). Lightning can not be predicted
- (2). There will be periods of occurring lightning
- (3). Lightning strikes can occur even when you are at home
- (4). Every cloud produces lightning

08. Which cloud contributes the most to the formation of lightning?

- | | |
|-------------------------|-----------------------|
| (1). Cumulonimbus cloud | (3). Cirrus cloud |
| (2). Stratus cloud | (4). All of the above |

09. A false statement regarding lightning accidents.

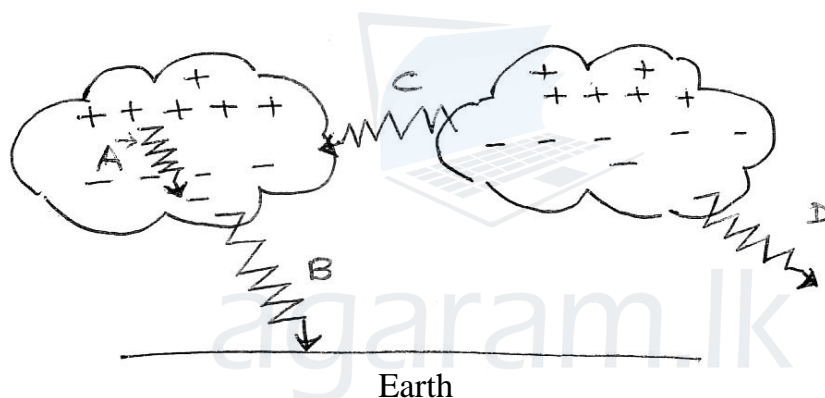
- (1). Limit the use of landline phones as much as possible in a lightning environment.
- (2). It is best to lie down in bed.
- (3). Do not touch a person who has been struck by lightning.
- (4). It is suitable to give artificial respiration to someone who has been struck by lightning

10. What is the period of activating lightning most in Sri Lanka?

- | | |
|-------------------------|--------------------|
| (1). January - February | (3). March - April |
| (2). May - June | (4). July - August |

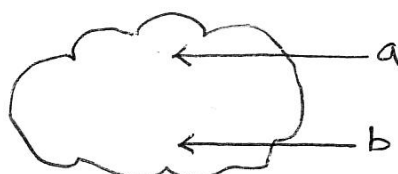
Part II

01.



- i. How lightning occurs?
- ii. How clouds are charged?
- iii. Name the three main types of lightning according to the mode of electrical discharge.
- iv. Name the types of lightning shown as A, B, C and D in this diagram.
- v. Name the three main ways by which lightning get earthed.
- vi. What are the periods of occurring lightning accidents most?
- vii. Name an action that can be taken to protect a tall building from lightning.
- viii. Mention three safety precautions to be followed when lightning.

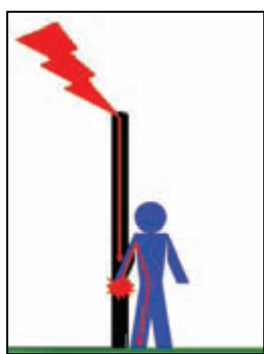
02. Following is a charged cloud.



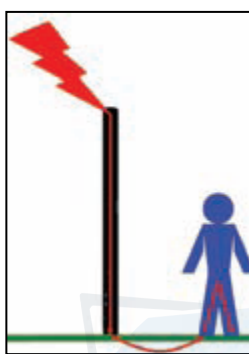
- i. Write the types of charges in "a" and "b" separately.

- ii. Name the three types of lightning that can occur depending on the location of the charge jump from the cloud.
- iii. What is the most harmful type of lightning from the above lightning?
- iv. Briefly describe how earth lightning (cloud to ground lightning) occurs.
- v. What is the voltage of earth lightning?
- vi. How thunder is formed in lightning?
- vii. What is felt first when lightning?

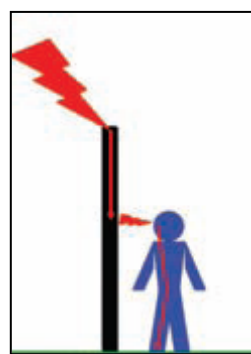
03. Below is how lightning get earthed, causing damages to human, animals and buildings.



P



Q



R

- i. Name P, Q and R.
- ii. What is the type of lightning relevant to each case below?
 - (a). Lightning strikes while keeping hands on a tree.
 - (b). Lightning strikes someone near a tall building.
 - (c). Lightning strikes a person on the ground.
- iii. Write down two precautions to be taken to avoid lightning strikes.
- iv. What is the best place to protect yourself from lightning strikes?
- v. Briefly describe the action of a lightning conductor.
- vi. Name the scientist who designed the lightning conductor.

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