

SCIENCE CASE STUDY TEST FOR CLASS VIII

Marks - 14

Case Study-I: Social misconception on the units of mass and weight in markets: It is often observed that in everyday life,

particularly for the goods, we commonly use, we are more interested in the amount of matter in an object that is 'mass' rather than the force applied by the Earth upon it what we say 'weight'). However,



though while the units of mass are used, instead of the term mass, the term weight is typically used. For example, it is said that the weight of the wheat bag is 10 kg. But in scientific use, this is not correct and it is important to use the correct terms

1. The symbol for actual SI unit used for weight is –
a) Wt b) N c) kg d) Pa (1)
2. To express the mathematical relationship between mass (m) and weight (W), symbolically we write
a) $m=Wg$ b) $W=mg$ c) $W= m+g$ d) $W=m/g$ (1)
3. State one difference between mass and weight. (1)
4. The mass of a sack containing wheat flour is 75 kg. If the acceleration due to gravity is 10 m/s^2 , the weight of that wheat filled sack will be
a) 85 N b) 75 N c) 10 N 750 N (1)

Case Study-II: Effects of atmospheric and Social ambience on Health: In a survey during health status in city lives, it is

found that nowadays in cities of modernity and busy lifestyles, the most important factors are atmospheric and social ambience to keep a sound health. AQI helps us know

how clean the air is. A cleaner environment helps us stay healthy and feel better. Our feelings on relationships and social ambience matter too. Even if we eat well and live in a clean place, we may not feel good if we are lonely or upset. Spending time with friends and family, talking, laughing, and having fun help keep our minds healthy too.

5. We should spend friendly attachments with talking, laughing and having fun while – (1)

- a) Getting advices from our parents
- b) While an important topic is being discussed by our teacher
- c) When we are in a picnic spot.
- d) When we visit hospitals to see a patient in a ward.

6. The full form of AQI is

- a) Air Quantity Index c) Atmospheric Quality Index
 - b) Air Quality Analysis d) Air Quality Index
- (1)

7. AQI judge the measure the level of _____ in atmosphere.

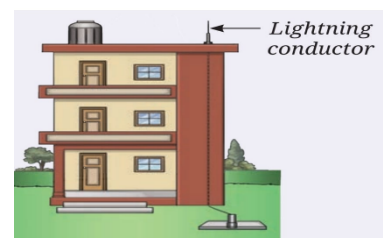
- a) Greenhouse gases c) Ozone
- depletion (1)
- b) Air pollution d) Humidity

8. Spending time with friends and family, talking, laughing, and having fun help keep our minds healthy too. The statement reflects the level of

- (1)
- a) physical well-being b) mental well-being c) social well-being
 - d) Emotional well being

9. The particulate matters present in the atmosphere is measured by the unit
- a) gram per litre c) microgram per cubic metre
(1)
b) gram per cubic metre d) microgram per litre

Case Study-III: Lightning Conductor: A survey from WBSEDCL, it has been filed that 70% of houses in a colony are unequipped with a lightning conductor. A lightning conductor is a metallic rod installed along the walls of buildings during their construction. One end of the rod is pointed. This end is kept higher than the highest point of the building. The other end of the rod is buried deep in the ground. So, WBSEDCL strictly instructed that every houses should be well equipped by a module of lightning conductor as it protects a house along with its belongings.



10. A lightning conductor module protect a house and its belongings from high electricity discharge of lightning by
- (1)
- a) Stopping the cloud formation
b) absorbing the cloud moisture
c) providing the easy path for the transfer of electric charges into the ground
d) By neutralising the charges within the cloud itself
11. The type of charged particles that are passed through the metallic conductor are

- a) Electrons b) protons c) atoms d)
molecules (1)

12. The optional pairs of metals which are considered to be very ideal to set up a lightning conductor module are –

(1)

- a) Gold or Silver c) Copper or Aluminium
b) Iron or Zinc d) Iron or Copper

13. A lightning conductor also protects the belongings of a house. The types of properties that a lightning conductor protect in a house from damage are –

(1)

- a) Wooden furniture c) Steel
furniture
b) Electrical appliances d)
Plastic goods

14. A term which is frequently used by domestic electricians in colloquial language while installing a lightning conductor module is –

- a) Plugging b) Short-circuiting c) Earthing
d) Shorting (1)
