

CBSE NCERT Solutions for Class 9 Science Chapter 13

Back of Chapter Questions

1. Under which of the following conditions are you most likely to fall sick?

- (a) when you are taking examinations.
- (b) when you have travelled by bus and train for two days.
- (c) when your friend is suffering from measles.

Why?

Solution:

I will be most likely to fall sick when my friend is suffering from Measles. This could happen when I go to visit my friend and will be possibly getting infected with measles. Measles is one of an infectious and an air-borne disease. The chances that when my friend shall sneeze or cough, the sputum containing microbes might get mixed with the air and get transferred to me through the air I breathe. Hence, the chances of getting infected increases.

2. How many times did you fall ill in the last one year? What were the illnesses?

- (a) Think of one change you could make in your habits in order to avoid any of/most of the above illnesses.
- (b) Think of one change you would wish for in your surroundings in order to avoid any of/most of the above illnesses.

Solution:

I fell ill thrice in the last year and suffered from the following diseases.

- i. Dysentery
- ii. Viral fever
- iii. Malaria

One of the changes in my habits is that now, I always ensure and thrive to stay hygienic and eat fruits or food that is neat, covered and clean.

One of the changes I wish to have in my surroundings is to prevent the amassment of garbage and stagnation of dirty water so as to keep my surroundings clean, neat and hygienic.

3. A doctor/nurse/health-worker is exposed to more sick people than others in the community. Find out how she/he avoids getting sick herself/himself.

Solution:

There are certain steps taken by doctors/nurses to avoid getting sick themselves, which include the following:

- i) They wear gloves and masks.
 - ii) They undergo Immunization.
 - iii) In order to enhance their immunity, they consume proteinaceous food.
 - iv) They consume prophylactic medicines.
 - v) They ensure that disposal of blood samples, sputum, etc., is done correctly.
4. A baby is not able to tell her/his caretakers that she/he is sick. What would help us to find out
- (a) that the baby is sick?
 - (b) what is the sickness?

Solution:

- (a) Some of the symptoms that could indicate the sickness in a baby are:
 - (i) High body temperature
 - (ii) Watering of eyes
 - (iii) Repeated crying
 - (iv) Redness of eyes
 - (v) Watery stools
 - (vi) Vomiting
- (b) The best way to determine the sickness is to take the baby to doctor who shall diagnose the baby based on the symptoms we tell him along with his observations, after which, the doctor shall advise the medications and precautions to be taken care of, to help the baby recover from illness. The above symptoms possibly indicate a High fever.

5. Conduct a survey in your neighborhood to find out what the three most common diseases are. Suggest three steps that could be taken by your local authorities to bring down the incidence of these diseases.

Solution:

I conducted a survey in my neighborhood and found the following three common diseases which are:

- (i) Malaria
- (ii) Cough and cold
- (iii) Loose motions

Some of the preventive measures that can be considered by the local authorities in order to keep a check on the recurrence of the diseases include:

- (i) Providing good and hygienic sanitary surrounding in a community
- (ii) Providing clean, fresh and uncontaminated water.
- (iii) By educating people about hygiene and preventive measures using pamphlets, posters and other sources of media.



In-between chapter questions:

1. State any two conditions essential for good health.

Solution:

Two conditions that are essential for good health are:

- (i) A person should be physically fit and fine.
 - (ii) A person should have a good social and economic conditions.
 - (iii) Clean environment in the surrounding of the person.
2. State any two conditions essential for being free of disease.

Solution:

Two conditions essential for being disease-free are:

- (i) A proper and balanced diet should be taken by the person.
 - (ii) Personal and community hygiene should be maintained.
3. Are the answers to the above questions necessarily the same or different? Why?

Solution:

The answers to the questions are the same to some extent, because if the essential conditions for good health are maintained, then automatically the chances of getting a disease will be minimized. But at the same time, it can be said that they are different because good health refers to physical, mental and social well-being as well staying devoid of diseases, makes them different as it refers to not suffering from any particular disease.

4. List any three reasons why you would think that you are sick and ought to see a doctor. If only one of these symptoms were present, would you still go to the doctor? Why or why not?

Solution:

Common symptoms which indicate sickness are as follows:

- (i) Headache

- (ii) Cough
- (iii) Dysentery

If any one of the above symptoms occurs, then immediate supervision of the doctor required. Any of the above symptoms can be the sign of sickness or disease.

Ignoring these symptoms, may promote the disease. The doctor can diagnose the disease and may ask for some tests to be done if required and then medication can be started.

5. In which of the following case do you think the long-term effects on your health are likely to be most unpleasant?
- (a) If you get jaundice,
 - (b) If you get lice,
 - (c) If you get acne.

Why?

Solution:

- (a) If jaundice occurs, long-term effect on the body takes place as liver does not function properly therefore effects are drastic in nature.
- (b) In case of lice, it usually rests in the body for long time, but it will not have a terrible effect on the body.
- (c) Acne is an effect of hormonal change or because of excess secretion of oil in our skin and it can be present for a long time but it will not affect the body adversely.

6. Why we are normally advised to take bland and nourishing food when we are sick?

Solution:

The normal metabolism of the body gets disturbed when we are sick. In such condition, food which can be digested easily and contains adequate nutrients should be taken so that it enhances fast recovery. Therefore, bland and nourishing food is recommended during sickness.

7. What are the different means by which infectious diseases are spread?

Solution:

Infectious diseases spread by the following means:

- (i) By means of air: When an infected person coughs or sneezes in our surrounding, the microbes spread into the air and then enter inside the body of a healthy person. Example- common cold, T.B. (tuberculosis) pneumonia etc.

- (ii) By means of water: The microbes which get discharged into the environment from the excreta of a person suffering from a gut (alimentary canal) disease enter inside the body of a healthy person when he drinks polluted or contaminated water. Example - Cholera.
 - (iii) By means of sexual contact: Microbial diseases such as AIDS and syphilis are transmitted by the means of sexual contact with an infected person.
 - (iv) By means of vectors: Some organisms are disease-causing and spread the disease by means of a vector. Example: female Anopheles mosquito (which spread malaria) acts as a vector.
8. What precautions can you take in your school to reduce the incidence of infectious diseases?

Solution:

Precautions to reduce the incidence of infectious diseases in the School are:

- (i) By making available fresh and hygienic drinking water.
 - (ii) By preventing accumulation of water, anywhere in the school.
 - (iii) By keeping the toilet neat and clean.
 - (iv) By avoiding the consumption of uncovered food and other eatables.
 - (v) By using a handkerchief to cover the mouth while sneezing or coughing.
 - (vi) By using vaccines and immunization.
 - (vii) By spraying insecticides after every few months.
9. What is immunization?

Solution:

It is a process of making our body immune towards the disease-causing microorganisms.

In this process, vaccine is injected into a healthy person to develop immunity against a specific disease. Thus, our immune system fights with a dead or attenuated microbe in the form of vaccine to enhance the immunity against the same disease. The cells of the immune system remember the microbe and kills it quickly in the next encounter.

10. What are immunization programmes available at the nearest health centre in your locality? Which of these diseases are the major health problems in your area?

Solution:

Immunization programmes available at the health centre near our locality are:

- (i) Vaccination against chicken pox.

- (ii) Vaccination against smallpox.
- (iii) Vaccination against Hepatitis.
- (iv) Vaccination against tuberculosis (BCG vaccine).
- (v) Polio drops against polio disease.
- (vi) DPT (vaccination against diphtheria, pertussis and tetanus).

Out of those, the key health issues in our area are: Chicken pox, T.B. and liver disease i.e Hepatitis.

