SCIENCE

WORKSHEET_110626

CHAPTER 03 HEALTH: THE ULTIMATE TREASURE

(ANSWERS)

SUBJECT: SCIENCE **MAX. MARKS : 40**

CLASS : VIII **DURATION : 1½ hrs**

General Instructions:

(i). **All** questions are compulsory.

(ii). This question paper contains 2**0** questions divided into five Sections A, B, C, D and E.

(iii). **Section A** comprises of **10 MCQs** of **1 mark** each. **Section B** comprises of 4 questions of **2 marks** each. **Section C** comprises of 3 questions of **3 marks** each. **Section D** comprises of 1 question of **5 marks** each and **Section E** comprises of 2 Case Study Based Questions of **4 marks** each.

(iv). There is no overall choice.

(v). **Use of Calculators is not permitted**

SECTION – A

Questions 1 to 10 carry 1 mark each.

1. You notice a headline that states '28.6% Indians are obese'. According to the chapter, what is one of the health risks associated with obesity?

(a) Loneliness (b) Increased risk of diabetes and heart attack

(c) Dry eye disease (d) Malaria

Ans. (b) Increased risk of diabetes and heart attack

The bulletin board connects obesity with diabetes, stating that "Fast food is one of the leading causes of diabetics" and the chapter mentions that diabetes and heart attack are prevalent in certain populations. The chapter also explicitly mentions that obesity is a cause of diabetes.

2. A student learns that the arrival of the monsoon season often leads to an increase in malaria and dengue cases. Which of the following is the most effective way to prevent the spread of these diseases, based on the chapter?

(a) Avoiding fast food (b) Using mosquito nets and repellents

(c) Practicing yoga (d) Drinking boiled water

Ans. (b) Using mosquito nets and repellents

The table on diseases transmitted by insects specifically mentions "Use of mosquito nets and repellents" as a preventive measure for both malaria and dengue fever.

3. A person is advised to follow a 'Diet mantra: Reduce the amount of oil and sugar in diet.' Based on the chapter's content, what is the most likely reason for this advice?

(a) To maintain a calm mind. (b) To prevent non-communicable diseases.

(c) To prevent communicable diseases. (d) To help the body recover from illness.

Ans. (b) To prevent non-communicable diseases.

The bulletin board links diet to diabetes, a non-communicable disease. The non-communicable diseases are linked to lifestyle and diet.

4. What is the definition of a parasite as given in the chapter?

(a) An organism that causes disease.

(b) An insect that spreads pathogens.

(c) An organism that lives in or on another living being and feeds on nutrients.

(d) A single-celled organism that causes disease.

Ans. (c) An organism that lives in or on another living being and feeds on nutrients.

Parasites is "organisms that live in or on another living being" and mentions that they "feed on nutrients."

5. Which of the following is a communicable disease?
(a) Scurvy (b) Cancer (c) Goitre (d) Typhoid
Ans. (d) Typhoid
Typhoid is a communicable disease, along with dengue, flu, and chickenpox.

6. What is the full form of NCDs?
(a) Non-Communicable Diseases (b) Non-Chronic Diseases
(c) National Communicable Diseases (d) New Communicable Diseases
Ans. (a) Non-Communicable Diseases
The text uses the abbreviation NCDs for non-communicable diseases.

7. Who was the Indian scientist who played a key role in developing the Rotavirus vaccine?
(a) Dr. Kamal Ranadive (b) Edward Jenner
(c) Alexander Fleming (d) Dr. Maharaj Kishan Bhan
Ans. (d) Dr. Maharaj Kishan Bhan
Dr. Maharaj Kishan Bhan's has key role in developing the Rotavirus vaccine.

8. Which of the following is a component of complete well-being as per the WHO definition of health?
(a) Physical well-being (b) Social well-being
(c) Mental well-being (d) All of the above
Ans. (d) All of the above
The WHO's definition of health is a state of "complete physical, mental, and social well-being."

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.
(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

9. **Assertion (A):** Dr. Maharaj Kishan Bhan developed the Rotavirus vaccine.
Reasoning (R): He believed in using research to create affordable healthcare.
Ans. (b) Both A and R are true, but R is not the correct explanation of A.
Dr. Maharaj Kishan Bhan did develop the vaccine and he did believe in affordable healthcare. However, his belief is not the reason or the direct explanation for him developing the vaccine.

10. **Assertion (A):** The indiscriminate use of antibiotics can lead to a decline in their effectiveness.
Reasoning (R): This is because bacteria can develop resistance and survive despite antibiotic treatment.
Ans. (a) Both A and R are true, and R is the correct explanation of A.
Indiscriminate use of antibiotics leads to antibiotic resistance, a phenomenon where bacteria survive and multiply despite treatment, which is why the drugs become less effective.

SECTION – B

Questions 11 to 14 carry 2 marks each.

11. What is the difference between a chronic disease and a short-term disease? Give an example of a chronic disease from the chapter.
Ans. A chronic disease is a disease that persists for a long time (more than 3 months), while a short-term disease lasts for a short time. An example of a chronic disease is diabetes.

12. Why is it important to spend time with friends and family?

Ans. Spending time with friends and family, talking, laughing, and having fun are important because they help keep our minds healthy. It addresses the mental and social aspects of health.

13. What is a balanced diet, and why is it important for a healthy lifestyle?
Ans. A balanced diet consists of plenty of fruits, vegetables, and whole grains. It is important for a healthy lifestyle because it provides the body with the necessary nutrients and helps prevent non-communicable diseases.

14. How does air pollution from vehicles and factories affect human health?
Ans. Air pollution from vehicles and factories can cause health problems like coughing and asthma. It also makes it hard for people to breathe, indicating that clean air is crucial for health.

SECTION – C

Questions 15 to 17 carry 3 marks each.

15. Explain how a disease is defined in the chapter. What are the two main groups of diseases based on their causes and spread?
Ans. A disease is a condition that affects the normal working of the body or mind, and can occur when one or more organs stop functioning properly. The two major types of diseases are communicable diseases and non-communicable diseases.

16. Some non-communicable diseases are deficiency diseases. Explain this with an example.
Ans. Deficiency diseases are a type of non-communicable disease caused by a lack of specific nutrients in the diet. An example is scurvy, which is caused by a lack of Vitamin C. The chapter also mentions anemia and goitre as deficiency diseases.

17. What are the different ways a communicable disease can spread from one person to another, as mentioned in the chapter?
Ans. Communicable diseases can spread through:

- By air: When an infected person coughs or sneezes.
- Direct contact: Like shaking hands.
- Indirect contact: By sharing personal items like towels.
- Contaminated food or water: Drinking water or eating food that contains pathogens.
- Vectors: Through insects like mosquitoes and houseflies.

SECTION – D

Questions 18 carry 5 marks each.

18. Explain the discovery of the first antibiotic, Penicillin, by Alexander Fleming. How did this chance discovery benefit humanity, and what is the biggest challenge associated with its use today?
Ans. In 1928, bacteriologist Alexander Fleming noticed that a mould growing on a discarded petri dish had stopped the growth of harmful bacteria. He realized that the mould was releasing a substance that was killing the bacteria. This chance discovery led to the development of Penicillin, the first antibiotic, which has since saved millions of lives by treating bacterial infections. The biggest challenge today is antibiotic resistance, where bacteria are becoming immune to antibiotics, making common infections harder to treat and increasing the risk of death.

SECTION – E (Case Study Based Questions)

Questions 19 to 20 carry 4 marks each.

19. Case Study-1:
A community health worker is conducting a campaign to educate people on the importance of hygiene. She explains that diseases like Hepatitis A and Typhoid spread through contaminated water and food. She stresses the importance of washing hands frequently, maintaining personal

hygiene, and consuming properly cooked food and boiled drinking water. She also mentions that during the monsoon season, there is an increase in diseases like malaria and dengue, which are transmitted by insects like mosquitoes.

Based on this story, answer the following questions:

(i) What type of diseases is the health worker focusing on in her campaign?

(ii) What are two diseases transmitted through contaminated food or water, as mentioned in the case study?

(iii) What are the insects that spread diseases like malaria and dengue called?

(iv) How can the community control the spread of malaria and dengue during the monsoon season?

Ans. (i) The health worker is focusing on communicable diseases because they are caused by pathogens and can spread from person to person through various means, including contaminated water and insect vectors.

(ii) The two diseases mentioned are Hepatitis A and Typhoid.

(iii) The insects that spread diseases like malaria and dengue are called vectors.

(iv) The community can control the spread of these diseases by using mosquito nets and repellents, wearing long-sleeved clothes, and controlling mosquito breeding by avoiding areas with still water.

20. Case Study-2:

A young boy named Aditya is advised to get a tetanus shot after an injury. He learns that the shot is a vaccine that contains an inactivated bacterial toxin. This helps his immune system develop protection without causing the disease. He is also told that vaccines are one of the most effective ways to protect people against serious diseases and that they are preventive, not curative.

Based on this story, answer the following questions:

(i) What type of disease is the tetanus shot protecting Aditya against?

(ii) What is a key purpose of the inactivated bacterial toxin in the vaccine?

(iii) According to the chapter, why is a tetanus shot considered a preventive measure?

(iv) What is the main principle behind how a vaccine works?

Ans. (i) The tetanus shot is protecting Aditya against an infection caused by tetanus-causing bacteria.
(ii) The purpose of the inactivated bacterial toxin is to help the immune system develop protection without causing the disease itself.
(iii) A tetanus shot is considered a preventive measure because it trains the immune system to recognize and fight the harmful germs before an infection can take hold. Vaccines are preventive, not curative.
(iv) The main principle is that a vaccine helps our body fight a disease by training the immune system to recognize and attack harmful germs.