INDIAN SCHOOL AL WADI AL KABIR		
CLASS: VIII	**DEPARTMENT: SCIENCE** **2026 - 2027**	**DATE: 31/10/2026**
WORKSHEET NO: 9 **WITH ANSWERS**	**TOPIC:** **HEALTH: THE ULTIMATE TREASURE**	**NOTE: A4 FILE FORMAT**
NAME OF THE STUDENT:	**CLASS & SEC:**	**ROLL NO.**

I. OBJECTIVE-TYPE QUESTIONS:

1. Which of the following is classified as a 'sign' of an illness rather than a 'symptom'?
(a) Headache felt across the temples
(b) Dizziness experienced upon standing
(c) High body temperature measured with a thermometer
(d) Abdominal discomfort reported by a patient

2. Diseases that persist for a long period (typically more than 3 months) are called:
(a) Acute diseases
(b) Chronic diseases
(c) Vector-borne diseases
(d) Infectious diseases

3. Insects such as mosquitoes and houseflies that transfer pathogens between hosts are known as:
(a) Parasites
(b) Vectors
(c) Antibiotics
(d) Antigens

4. What causes Tuberculosis (TB), and which primary organ does it infect?
(a) Bacteria infecting the intestine
(b) Bacteria infecting the lungs
(c) Virus infecting the liver
(d) Protozoan infecting red blood cells

5. Malaria is caused by which class of microorganisms?
(a) Viruses
(b) Bacteria
(c) Protozoa
(d) Fungi

6. The specialized protection developed by the body's immune system after exposure to a pathogen or vaccine is called:
(a) Innate immunity
(b) Acquired immunity
(c) Passive antibiotic defense
(d) Hormonal immunity

7. Dr. Edward Jenner developed the first successful vaccine in the late 1700s based on his observation of:
(a) Rabid dogs
(b) Milkmaids infected with cowpox
(c) Hospital cholera outbreaks
(d) Bread mould producing penicillin

For questions 8-10, two statements are given: one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (A), (B), (C) and (D) as given below -

(A) Both A and R are true, and R is the correct explanation of the assertion.

(B) Both A and R are true, but R is not the correct explanation of the assertion.

(C) A is true, but R is false.

(D) A is false, but R is true.

8. Assertion (A): Antibiotics should not be taken to treat viral infections like the common cold or flu.
Reason (R): Antibiotics specifically target and kill bacteria, but are ineffective against viruses.

9. Assertion (A): Non-communicable diseases (NCDs) like diabetes and heart disease are currently the leading cause of death in India.
Reason (R): Non-communicable diseases spread rapidly from an infected person to a healthy person through air droplets and direct physical contact.

10. Assertion (A): Vaccines are considered preventive measures rather than curative treatments.
Reason (R): A vaccine trains the immune system to recognise and attack pathogens before a disease occurs, but does not cure a person who is already sick.

II. VERY SHORT ANSWER TYPE QUESTIONS (2M):

1. Explain why non-communicable diseases (NCDs) have become more common in India today.
[Answer: NCDs are rising due to modern lifestyle shifts: high intake of processed and sugary foods, living with minimal physical exercise, increased digital screen time, and longer lifespans]

2. Differentiate between acute and chronic diseases with one example of each.
   [Answer: Acute diseases develop quickly and last for a brief duration (e.g., common cold or flu), whereas chronic diseases persist for a long time, typically more than 3 months, requiring ongoing treatment (e.g., diabetes or asthma).]

3. Distinguish between communicable and non-communicable diseases.
   [Answer**:** Communicable diseases are caused by pathogens and can spread from an infected person to a healthy host (e.g., cholera, flu), while non-communicable diseases are linked to lifestyle, diet, or genetics and cannot spread between individuals (e.g., cancer, diabetes).]

4. What is antibiotic resistance and why is it dangerous for community health?
   [Answer: Antibiotic resistance is the condition where bacteria survive and multiply despite antibiotic treatment. It makes common bacterial infections harder to treat, prolongs illness, and increases the risk of severe complications and death.]

5. State two lifestyle modifications recommended for preventing or managing diabetes.
   [Answer: Adopt a balanced diet low in sugar and refined fats, and engage in regular physical exercise or outdoor sports to help regulate blood glucose levels.]

6. Distinguish between natural immunity and acquired immunity.
   [Answer: Natural immunity is the body's natural defence against infections that is present from birth, whereas acquired immunity is the targeted protection developed specifically after exposure to a pathogen or vaccination.]

7. What is a vector-borne disease? Give two examples.
   [Answer: Vector-borne diseases are communicable infections caused by pathogens that are transmitted to humans by intermediate organisms, particularly insects like mosquitoes and houseflies, which are known as vectors. Examples: Malaria, Dengue Fever (breakbone fever)]

III. <u>SHORT ANSWER TYPE QUESTIONS (3M):</u>

1. Explain the three interconnected dimensions of health defined by the World Health Organisation (WHO).
   [Answer**:** 1. Physical Well-being: Proper biological functioning of organs, adequate energy, and absence of physical illness or pain.
   2. Mental Well-being: A calm, positive mindset, good emotional regulation, and ability to handle stress effectively.
   3. Social Well-being: Strong relationships with friends and family, positive adaptation within peer groups, and active participation in society.]

2. Describe the four primary modes through which communicable diseases spread from an infected person to a healthy host.

[Answer: 1. Air: Inhaling airborne droplets released when an infected person coughs or sneezes (e.g., flu, common cold, TB).
2. Contaminated Water and Food: Consuming unboiled water or unhygienically handled food carrying pathogens (e.g., cholera, typhoid, hepatitis A).
3. Contact: Direct physical contact (handshakes) or indirect contact through shared personal items like towels and utensils.
4. Insect Vectors: Bites from insects like mosquitoes that inject pathogens directly into the blood (e.g., malaria, dengue).]

3. A patient experiences high fever, profuse sweating, and periodic chills. Identify the disease, causal agent, vector, and three prevention steps.
[Answer: 1. Disease & Causal Agent: Malaria, caused by a protozoan pathogen.
2. Vector: Female mosquitoes.
3. Preventive Measures: Sleep under mosquito nets, apply insect repellents, and eliminate stagnant water around residential premises to prevent mosquito breeding.]

4. Outline the causal agent, organ site, characteristic symptoms, and prevention of Tuberculosis (TB).
[Answer: 1. Causal Agent & Site: Caused by bacteria, primarily targeting the lungs.
2. Symptoms: Persistent coughing, low-grade fever, fatigue, loss of appetite, and night sweats.
3. Prevention: Avoid close unprotected contact with TB patients, cover mouth and nose while coughing, maintain good ventilation, and receive the BCG (Bacillus Calmette-Guérin) vaccine.]

5. Suggest three effective and considerate strategies to handle peer pressure regarding tobacco use.
[Answer: 1. Confidently say 'NO' with a clear, firm statement.
2. Calmly explain that smoking damages lung tissue and causes life-threatening chronic diseases.
3. Spend time with peers who encourage healthy, active habits, and approach a school counsellor if peer pressure persists.]

6. Discuss the role and limitations of traditional medicine systems (Ayurveda, Siddha, Unani) in healthcare.
[Answer: 1. Traditional medicines utilise natural herbs, oils, and dietary guidelines to support wellness, restore body balance, and manage minor ailments.
2. It is highly beneficial for daily health maintenance, building digestive resilience, and promoting recovery.
3. Limitations: Traditional systems may not be effective for all severe acute infections, advanced disease stages, or emergency conditions where modern medical interventions are essential.]

IV. LONG ANSWER TYPE QUESTIONS (5M):

1. Give in detail the causal agent, organ sites, symptoms, and prevention of major diseases spread by contaminated water and food.

Answer:

Disease	Causal Agent	Site of infection	Symptoms	Preventive measures
Cholera	Bacteria	Intestine	Diarrhoea and dehydration	Drink boiled water, maintain personal hygiene and good sanitary habits, vaccination.
Typhoid	Bacteria	Intestine	Fever, headache, abdominal discomfort, and diarrhoea	Drink boiled water, maintain personal hygiene and good sanitary habits, vaccination.
Hepatitis A	Virus	Liver	Fatigue, fever, loss of appetite, nausea, vomiting, right-upper abdominal pain	Drinking boiled water and vaccination
Ascariasis (Roundworm)	Worms	Intestine	Worms in stool, loss of appetite, abdominal pain, poor growth, and anaemia	Maintain personal hygiene and good sanitary habits; consume properly cooked food and boiled drinking water.

2. Discuss the importance of sanitation in controlling communicable diseases using any example.
[Answer: Good sanitation keeps our surroundings clean and disposes of human waste safely, preventing disease-causing germs (pathogens) from spreading.
Using clean toilets stops sewage from mixing into drinking water, preventing waterborne diseases like cholera, typhoid, and hepatitis A.
Safe waste disposal prevents roundworm eggs from contaminating the soil and vegetables, protecting children from intestinal worm infections and anaemia.
Clearing garbage and draining stagnant water removes breeding grounds for houseflies and mosquitoes, which spread illnesses like malaria and dengue.
A community sanitation campaign in Bhadrak, Odisha helped villagers build and use household toilets. By reducing open defecation, the community saw a sharp decline in cases of diarrhoea and child infections.]

V. CASE STUDY- BASED QUESTIONS/PASSAGE-BASED QUESTIONS:

Case Study: Adolescent Mental and Digital Health (Activity 3.1)

A Grade 8 student recently moved to a new school in a large metropolitan city. Having no friends in his new surroundings and with his parents working long hours, he felt deeply isolated and lonely. To cope, he spent excessive hours on his smartphone and social media platforms. Rather than helping, this worsened his mood. He stopped attempting to make friends, developed frequent throbbing headaches, lost significant weight, and suffered from chronic insomnia. Concerned, a

doctor recommended strictly limiting screen time and meeting the school counsellor. The counsellor provided compassionate emotional support, assisted him in connecting with peer groups, and gradually restored his health and academic enthusiasm.

(i) Identify the root environmental and emotional triggers behind the student's health decline.
[Answer: Relocating to an unfamiliar city, having busy parents, experiencing social isolation and loneliness, and using excessive screen time.]

(ii) Classify the student's symptoms into physical, mental, and social dimensions.
[Answer**:** Physical: Headaches, weight loss, and chronic insomnia.
Mental: Low mood, emotional distress, and anxiety.
Social: Withdrawal from peers and inability to form friendships.]

(iii)Suggest two actionable steps the student and school took to reverse this condition.
[Answer: The doctor advised reducing digital screen time, and the school counsellor provided supportive guidance to help him build positive friendships with classmates.]

ANSWERS FOR OBJECTIVE TYPE QUESTIONS [1 to 10]

1. (c) High body temperature measured with a thermometer
2. (b) Chronic diseases
3. (b) Vectors
4. (b) Bacteria infecting the lungs
5. (c) Protozoa
6. (b) Acquired immunity
7. (b) Milkmaids infected with cowpox
8. (A) Both A and R are true, and R is the correct explanation of the assertion.
9. (C) A is true, but R is false.
10. (A) Both A and R are true, and R is the correct explanation of the assertion.

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