

**1. Write T for a true and F for a false statement.**

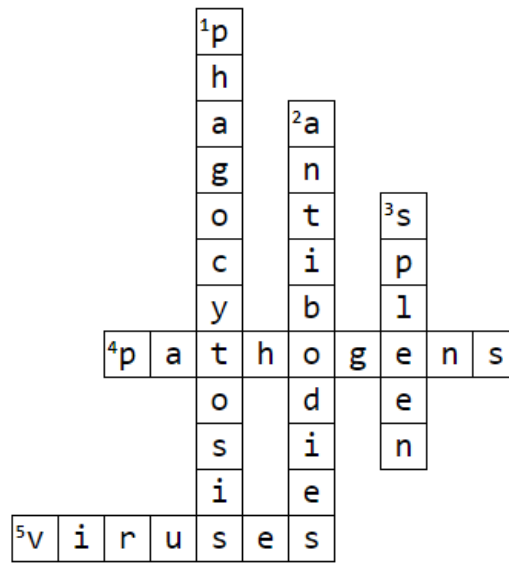
- i. Red blood cells are involved in immunity production.
- ii. Bacteria are single celled microorganisms.
- iii. Mushroom is a fungus.
- iv. Athlete's food is caused by bacteria.
- v. Parasites live on the bodies of other organisms.

<b>F</b>
<b>T</b>
<b>T</b>
<b>F</b>
<b>T</b>

**2. Fill in the blanks**

- i. **Pathogens** are microorganisms that can cause disease in their host.
- ii. The three main types of pathogens are bacteria, fungi, and **viruses**.
- iii. Bacteria are single-celled prokaryotic organisms that lack a **nucleus**.
- iv. Fungi are eukaryotic organisms that help to **decompose** dead plants and animals.
- v. Dengue fever is caused by a virus spread by **Aedes** mosquitoes.

**3. Crosswords**



Across	Down
4. Microorganisms that cause diseases	1. Process of ingesting foreign substances
5. tiny particles that cause infectious diseases	2. Special proteins of immune system
	3. Purple coloured organ

**6. Jumbled Words**

Jumbled words	Arranged words
i. HYMUST	
ii. SILSTON	
iii. DIXPENAP	
iv. NITYIMMU	
v. NSEDEFE	

### 7. Words Search

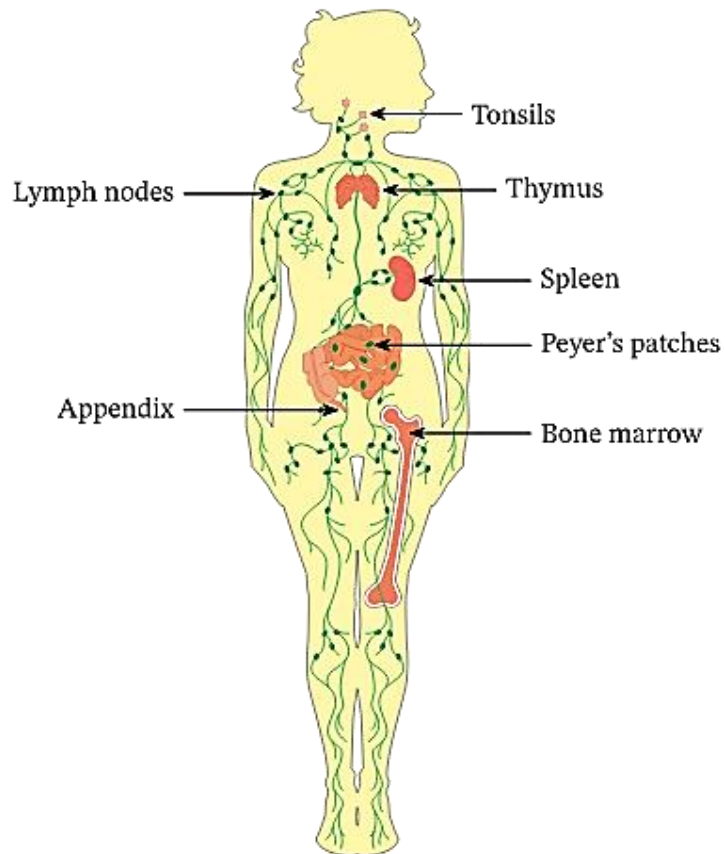
Find the following word in the words search.

Immunity	Antigen	Pathogen	Lymphocyte	infection
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D	D	D	T	L	I	C	M	F	E
I	F	A	T	Y	A	F	D	A	S
M	M	O	S	M	O	S	I	S	A
M	R	E	A	P	H	I	F	G	E
U	M	U	S	H	L	E	F	L	A
N	V	N	T	O	E	A	U	A	S
I	N	F	E	C	T	I	O	N	
T	N	C	M	Y	G	E	I	T	W
Y	G	A	N	T	I	G	E	N	V
V	I	N	F	E	C	T	I	O	N

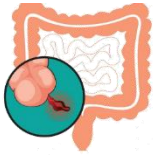


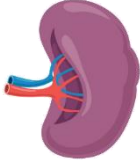

**8. Label the diagram.**

Components of immune system



### 9. Drag and Drop

Look at the pictures and write the name of structure in the relevant column.

				
Appendix	Tonsils	Adenoids	Spleen	Bone marrow

Function	Structure
Stores white blood cells	Spleen
Produces blood cells	Bone marrow
Response to infections	Tonsils
Helps in the production of some antibodies	Appendix
Infection fighters in babies	Adenoids

### 10. Comprehension

Fill in the blanks after reading the paragraph and observing the picture carefully.



The immune system is like our body's defense team, protecting us from germs and diseases. It consists of different parts, including white blood cells, antibodies, and organs like the spleen and thymus. When germs enter our body, the immune system recognizes them as invaders and springs into action. White blood cells attack the germs and help us get better when we are sick. Vaccines help train our immune system to fight off specific germs without getting sick. Keeping our immune system strong through a healthy diet and exercise is important for staying healthy!

**i. What is the function of immune system?**

The immune system is like our body's defense team, protecting us from germs and diseases.

**ii. What is the role of white blood cells in immune system?**

White blood cells attack the germs and help us get better when we are sick

**1. Define the following:**

**a) Pathogen**

Microorganisms that cause diseases in human body are called pathogens.

**b) Antigen**

An antigen is a substance that enters the body and causes the immune system to produce antibodies against it.

**c) Infection**

Entry and growth of pathogens into our body is called infection.

**d) Phagocytosis**

Phagocytosis refers to the process by which certain living cells called phagocytes engulf other cells, particles and even pathogens.

## 2. Answer the following long question.

i. Describe the physical barriers against the pathogens in human body.

The human body has several physical barriers that help protect against pathogens (germs) that can cause illness.

**Examples:**

- **Skin:** The skin acts like a shield that covers our body, stopping most germs from getting inside.
- **Mucus:** This sticky substance is found in places like the nose and throat. It traps germs so they can not get deeper into the body.
- **Tears:** Tears wash away germs from our eyes.
- **Stomach Acid:** The acid in our stomach kills many germs that we might swallow.

ii. Give brief introduction of pathogens (virus, bacteria, and fungi).

**Explain how they enter human body.**

**Pathogens** are tiny organisms that can cause diseases. There are three main types of pathogens: viruses, bacteria, and fungi.

- **Viruses** are very small particles that can only grow and multiply inside living cells.
- **Bacteria** are tiny, single-celled prokaryotic organisms that can live in various environments.
- **Fungi** are a kingdom of organisms that include yeasts, molds, and mushrooms, which absorb nutrients from organic matter.

Pathogens enter the body through breaks in the skin, inhalation, ingestion, or through bodily fluids.

**iii. What are infectious diseases? Give examples.**

The diseases which are caused by pathogens are called infectious diseases.

These diseases can spread from person to person.

**Examples of Infectious Diseases:**

1. **The Flu (Influenza):** A viral infection that causes fever, cough, sore throat, and body aches.
2. **Common Cold:** Another viral infection that leads to runny nose, sneezing, and sore throat.
3. **Chickenpox:** A viral infection that causes itchy red spots all over the body.
4. **Tuberculosis (TB):** A bacterial infection that mainly affects the lungs, causing coughing and chest pain.

**iv. How can we avoid infections?**

Infections can be avoided in many ways:

Wash your hands with soap and water for at least 20 seconds.

Stay away from sick people to avoid spreading germs.

Get vaccinated to protect against certain diseases.

Clean and disinfect surfaces regularly to kill germs.

Eat healthy foods to boost your immune system.

**v. Describe the parts of immune system.**

The immune system helps protect our bodies from germs and diseases. It has three main parts:

- **White Blood Cells:** These are like tiny soldiers that fight off infections. When germs enter the body, white blood cells attack and destroy them.



- **Antibodies:** These are special proteins made by white blood cells. They recognize and remember specific germs, helping the body to fight them off more quickly if they come back.
- **Lymphatic System:** This is a network of vessels and nodes that helps transport white blood cells and filters out germs and waste. It also includes lymph nodes, which swell when fighting infections.

**3. Tick the right option.**

<b>1. A pigment in the skin that protects against harmful effects of sunlight;</b>			
a. melanin	b. haemoglobin	c. lymphocyte	d. lysozyme
<b>2. Hydrochloric acid is found in:</b>			
a. saliva	b. gastric juice	c. bile	d. pancreatic juice
<b>3. _____ is the inflammation of liver.</b>			
a. tuberculosis	b. typhoid	c. COVID-19	d. hepatitis
<b>4. Billions of new blood cells are produced daily in:</b>			
a. heart	b. liver	c. spleen	d. bone-marrow
<b>5. Nuclear membrane is not found in:</b>			
a. plant cell	b. animal cell	c. bacterial cell	d. fungal cell