

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

السَّلَامَةُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ وَبَرَكَاتُهُ



Pakistan School
Kingdom of Bahrain

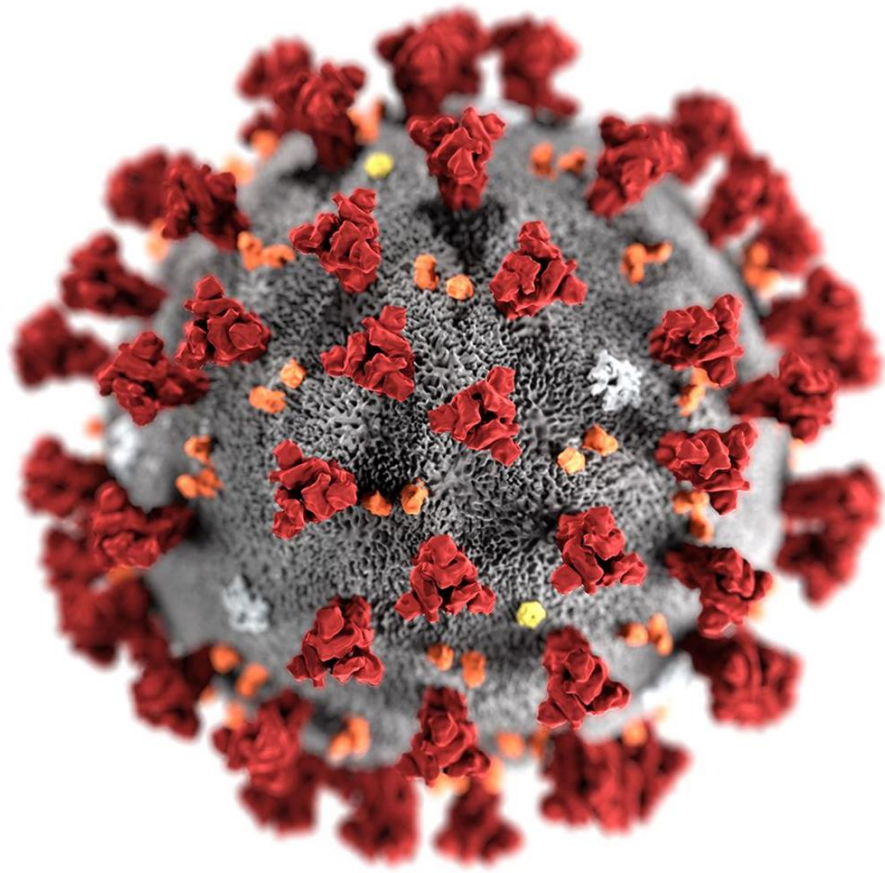


Viral Diseases

Grade: 9th

RULES OF THE CLASS!!

- ❖ Be on **time**
- ❖ Enter the class with your **name** and **CPR number**
- ❖ **Respect** all participants
- ❖ Do **not** create any disturbance
- ❖ **Raise your hands** for questions (the teacher will respond when the time is suitable)
- ❖ Pay **attention** to the teacher
- ❖ Follow the **time table**



Covid-19 is caused by Coronavirus

Objectives:



By the end of the lesson, the students will be able to describe:

1. Describe various viruses
2. Name some of the viral diseases
3. Description of causes, symptoms and treatment of some viral diseases
4. Invention of vaccines



Smallpox

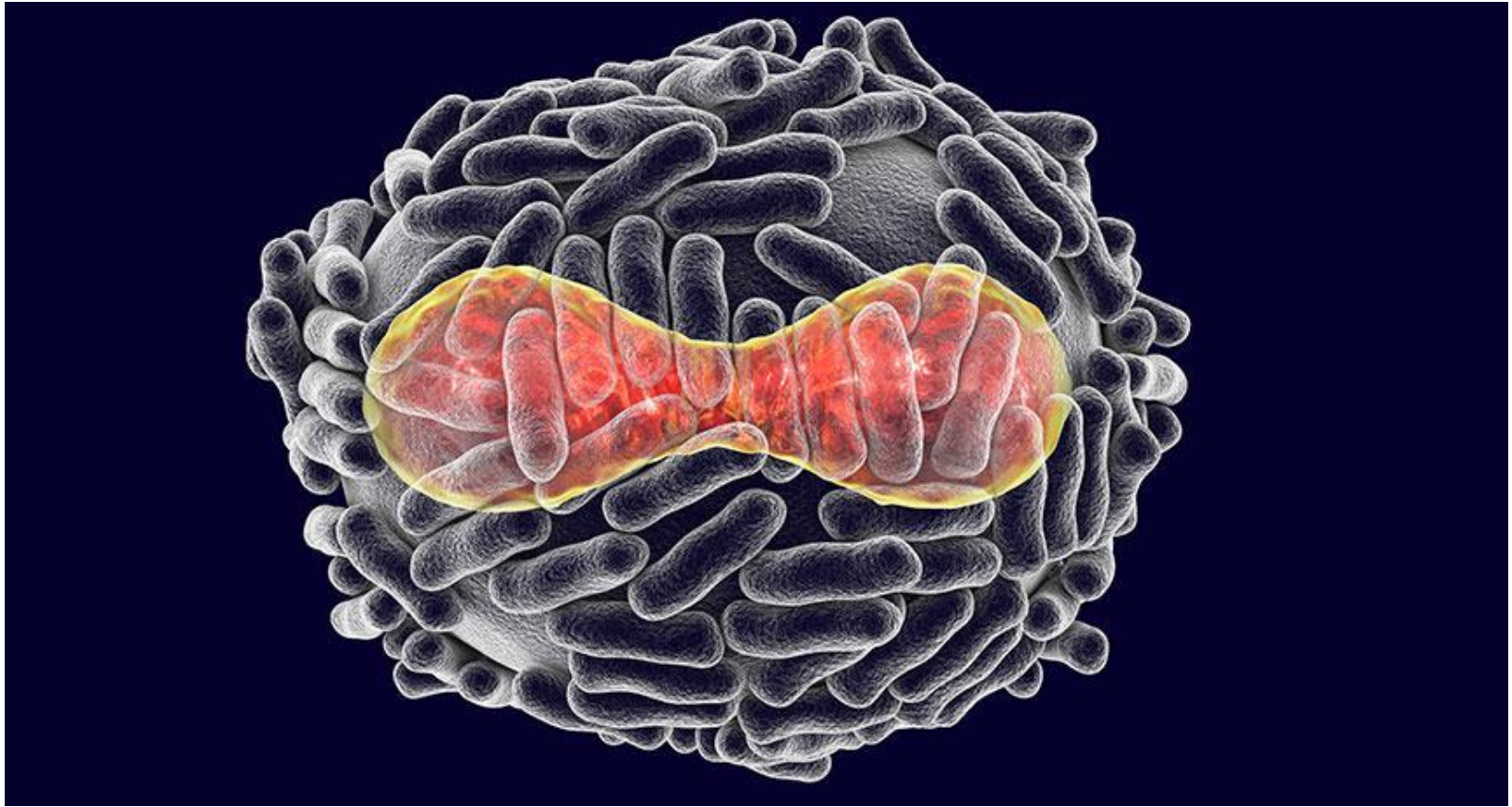
Cause: [Variola Virus](#). It is an [airborne disease](#) which spreads fast. It has been [eradicated](#) from the world.

Transmission: Virus spreads through the [droplets](#) of infected person when they a) coughing b) sneezing and through c) direct contact with body fluids of infected person

Symptoms: Around 500 small [boils](#) (pus-filled spots) appear on entire body of the person.

Treatment: [Isolation](#) and [vaccination](#). The patient *must* be isolated from everybody.

[Edward Jenner](#) in [1796](#) is well-known for his contribution to immunization and eradication of smallpox.



Smallpox was caused by Variola Virus

Poliomyelitis (or Polio)

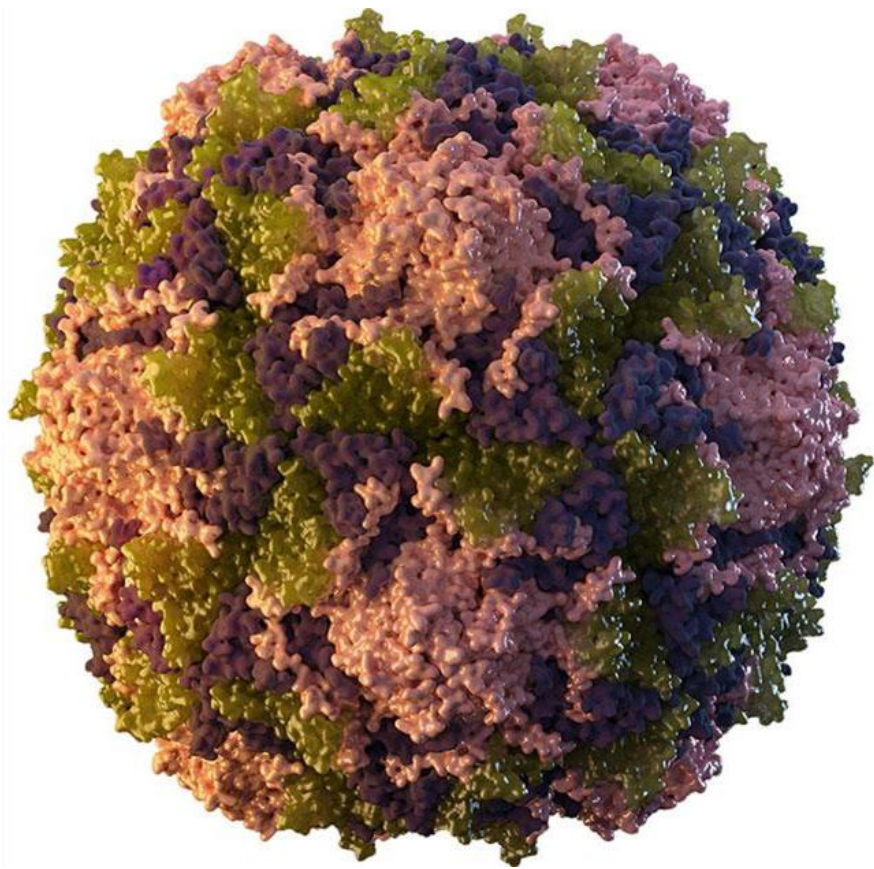
Cause: Poliovirus. It is a disease of infants below age of five. In it, lower limbs become damaged and children become disabled due to paralysis. It is not fully eradicated from the world.

Transmission: a) air b) water c) most commonly through feces (because children don't wash their hands properly)

Symptoms: a) Fever b) Headache c) neck stiffness d) legs paralyzed (can't move)

Treatment: Polio vaccines: Oral Polio Vaccine (OPV), which are oral polio drops, and Inactivated Polio Vaccine (IPV). They are given to infants at regular intervals upto age of 5.

Albert Sabin in 1960 invented OPV in US.



Poliomyelitis is caused by Poliovirus



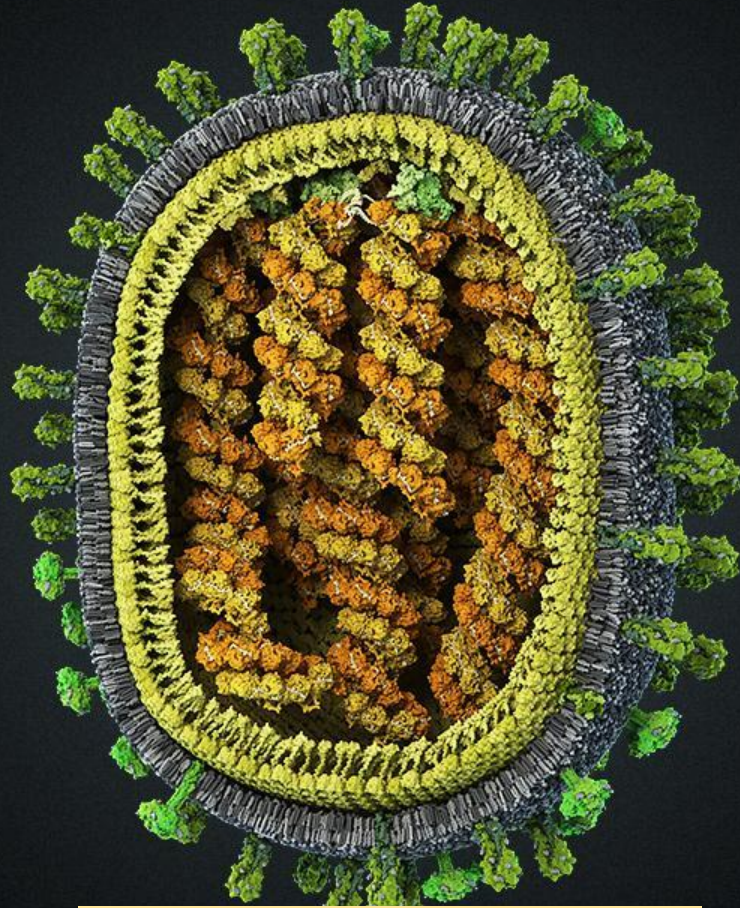
Influenza

Cause: Influenza virus.

Transmission: Spreads through the air by a) coughing b) sneezing by the infected person

Symptoms: a) Fever b) redness of eyes c) Irritation & runny nose

Treatment: a) resting b) using drugs



Influenza virus

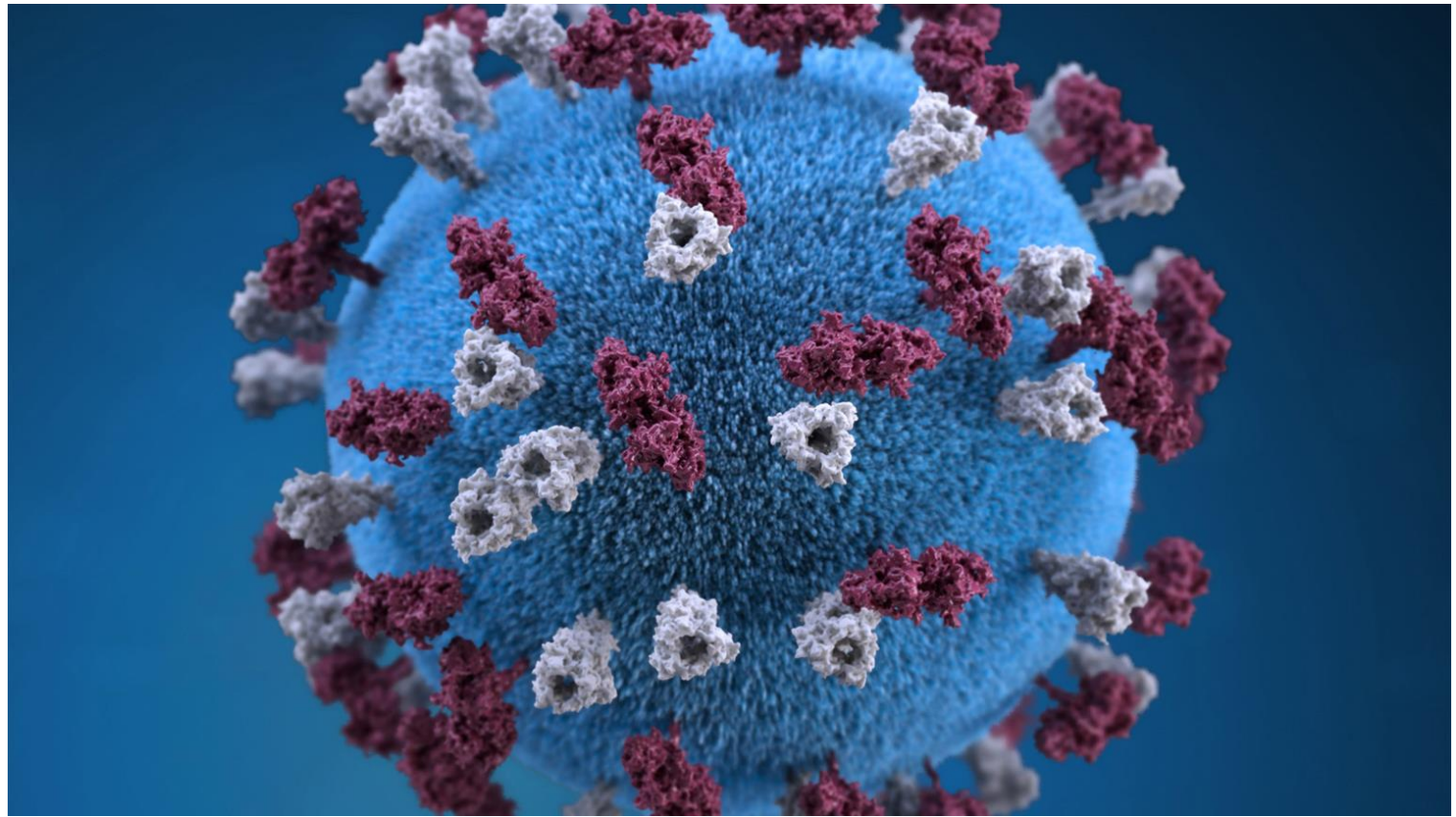
Measles

Cause: [Measles virus](#). It is a highly contagious virus. It is the disease of the infants.

Transmission: virus transmitted in [droplets](#) of infected people through [air](#)

Symptoms: a) cough b) fever c) small boils appear on the body, face, chest. They are light gray in color with red circles around them.

Treatment: [Vaccine](#). The disease reduces in 10 days.



Measles is caused by Measles virus

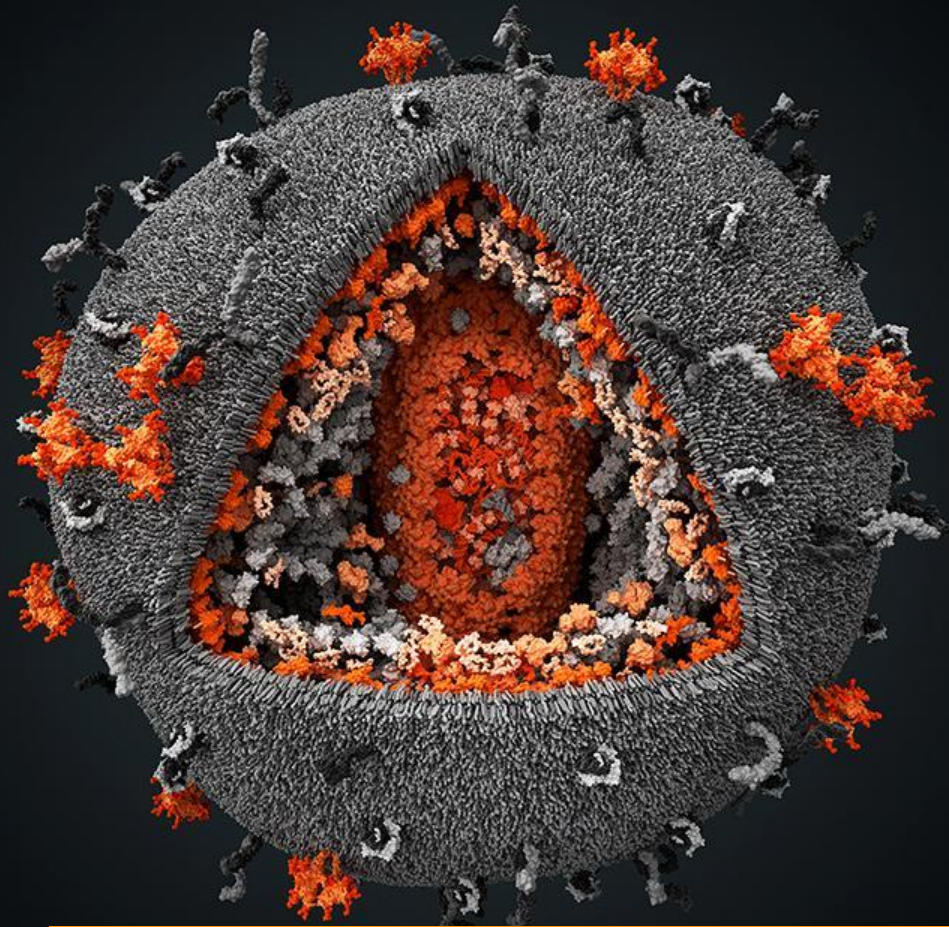
AIDS: Acquired Immune Deficiency Syndrome

Cause: HIV (Human Immunodeficiency Virus). It is a fatal viral disease which kills the white blood cells. As such, the immune system is destroyed and the patient becomes an easy victim for other diseases, like tuberculosis, pneumonia, typhoid, etc.

Reason: The patient becomes easily susceptible to other diseases which ultimately kills them is because loss of natural resistance and weakened, destroyed immune system of their body.

Transmission: a) blood transfusions b) contaminated syringes and c) through exchange of HIV positive person's body fluids (e.g. blood, breast milk, semen, etc)

Treatment: a) Drugs given to reduce symptoms. Currently there is no cure (vaccine in experimental stages) but it is treatable with medicines.



AIDS is caused by HIV

Hepatitis

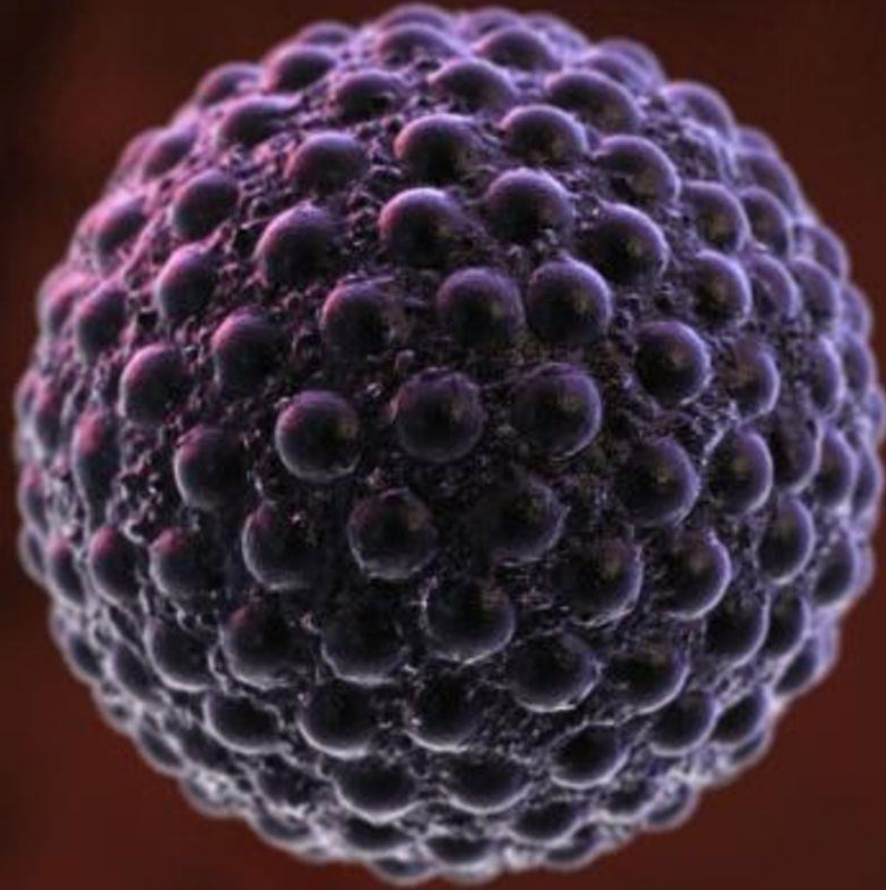
It is a **disease of the liver** caused by **viruses**, which invades and destroys the liver cells. It can result in death.

Types: **3 types:** Hepatitis A, B and C

Symptoms: a) Jaundice b) Abdominal pain c) Liver enlargement d) fatigue e) Loss of appetite f) Fever

Transmission: a) **blood** b) **saliva** and c) **mother's milk** d) Hepatitis A spreads through **fecal contact** of infected person

Treatment: Vaccine for Hepatitis A and B exists but not for Hepatitis C.



Hepatitis A virus

ACTIVITY 1

Answer the following.

Q1) Describe the causes of smallpox and polio.

Q2) Who invented smallpox vaccine?

Q3) What does AIDS stand for?

Q4) How many types of Hepatitis viruses are present?

ACTIVITY 2

Fill in the blanks.

- 1) Viruses are _____ organisms.
- 2) They can be seen under _____ microscope only.
- 3) The body of the virus has outer coat of _____ and inner part of _____
or _____.
- 4) Viruses reproduce inside a _____ cell only.

ACTIVITY 3

True or false.

- 1) Polio is a disease of the infants. _____
- 2) Poliovirus does **not** spread through air and water. _____
- 3) Oral polio vaccine (OPV) was invented by Edward Jenner. _____
- 4) Influenza virus spreads through the air. _____
- 5) AIDS is caused by HIV. _____

PLENARY ACTIVITIES

Q1) What are the symptoms of hepatitis?

Q2) Does the HIV virus destroy the immune system of the patient?

MCQS

1) The hepatitis virus invades:

- a) stomach cells
- b) skin cells
- c) liver cells
- d) muscle cells

2) Vaccines are available for:

- a) Hepatitis A
- b) Hepatitis B
- c) Hepatitis A & B
- d) Hepatitis C

HOMEWORK

Do any two.

Q1) Describe the cause, symptoms and treatment of polio.

Q2) Write down a note on different types, symptoms and treatment of hepatitis.

Q3) Which disease is a fatal one but has been eradicated from the world? Describe it.

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CLASS IS OVER!

STAY FOCUSED ON YOUR STUDIES!

SEE YOU NEXT CLASS INSHA'ALLAH!