

WORKSHEET ON MICRO ORGANISM

1. The Nobel laureate poet Rabindranath Tagore visited Mangpu quite often between 1938 and 1940. He used to stay at the residence of his protégé Maitreyi Devi, who was herself a renowned poet and novelist. Maitreyi Devi's husband Manmohan Sen was at that time the director of the quinine factory in Mangpu. The Directorate of Cinchona and Other Medicinal Plants started functioning in Darjeeling in 1862, initially for growing Cinchona **trees** and to produce the life-saving anti-Malarial drug(Quinine) from its bark.



a. Mention the name of **pathogen** and **carrier** for Malaria disease.

b. _____ is commonly known as Malarial Parasite.

c. Write two common diseases caused by Protozoa

2. Observe the following label of a Chilli Sauce bottle. **INS211** i.e Sodium benzoate, a preservative used in food to prevent the growth of bacteria, yeast, and fungi. It's commonly used in acidic foods like fruit juices, soft drinks, pickles, sauces, salad dressings. Wheat allergy is a food allergy that occurs when the body's immune system overreacts to proteins in wheat.



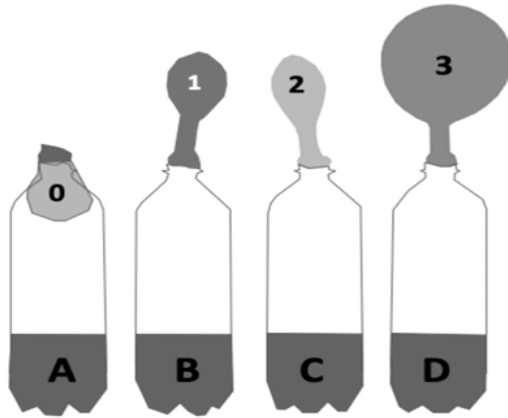
a. Write the purpose of INS211 in the chilli sauce.

b. Write the chemical name of International Numbering System 211.

c. Mention the part of wheat that triggers the allergy.

3. Activity based question.

1. Take each bottle and label them as A,B,C and D
2. Pour warm water in each of the plastic bottles
3. Add small amounts of yeast in all four of them
4. Add one, two, three and four tablespoons of sugar in each one of them
5. Shake the bottle gently
6. Replace the cap of the bottle and cover it with a balloon.
7. Note your observations



a. Write the materials required for the activity.

b. Yeast is a X type of microorganism. What is X?

c. Write two disease caused by X.

d. What is causing the balloon to inflate?

4. Communicable diseases(CDs) including HIV/AIDS, tuberculosis (TB), malaria, viral hepatitis, sexually transmitted infections and neglected tropical diseases (NTDs), COVID 19 are among the leading causes of death and disability in low-income countries and marginalized populations.

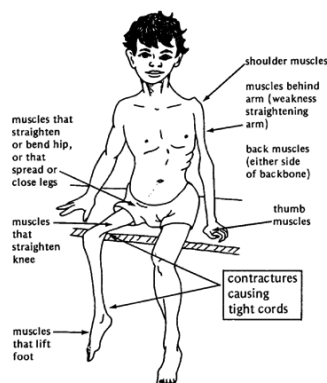
Non communicable diseases (NCDs) – mainly cardiovascular diseases, diabetes, cancers and chronic respiratory diseases – are the leading cause of death worldwide.

a. Explain three means transmission of Communicable diseases.

b. Write the full form of SARS.

c. Write full form of AIDS also mention the pathogen name.

5. Polio is a viral disease. It's caused by the poliovirus, which is spread through person-to-person contact, mainly through the fecal-oral route, or less frequently, by contaminated water or food.



The Pulse Polio Immunization Programme (PIIP) is a government-run campaign in India to eradicate polio by vaccinating children under five years old against the polio virus. The program was launched in Delhi in 1994, when India accounted for about 60% of the world's polio cases.

Jonas Salk, an American virologist, developed the first successful polio vaccine in the early 1950s. Salk's inactivated polio vaccine (IPV) was first used in 1955. IPV is given by injection and produces antibodies that prevent the spread of the virus to the central nervous system and protect against paralysis.

a. Polio vaccine is given as drops- why?

b. Write the name of the pathogen of this disease.

c. Write the full form of PPIP.

6. ICMR-NIV continued to played a pivotal role in the fight against novel COVID-19(Corona Virus Disease of 2019). It screened over eight lakh clinical samples for SARS-CoV-2, providing critical data for epidemiological surveillance and control measures. COVAXIN, India's indigenous COVID-19 vaccine by Bharat Biotech is developed in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV).

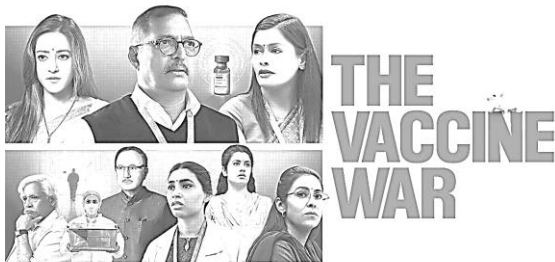


a. Write the full form of NIV.

b. Write the name of the vaccine developed by BB with ICMR and NIV.

c. COVID-19 was a novel Corona virus- why it was novel?

7. Write the difference between vaccine and vaccination.



+ NCERT EXERCISE+ KEYWORD EXPLANATION