

date

## LEPROSY

It is chronic infectious disease caused by a bacteria. In this disease painful nodules are formed. These are beneath the skin. Leprosy is of four types: (A) Intermediate leprosy, (B) Lepromatous leprosy, (C) Tuberculoid leprosy, (D) Dimorphic leprosy. ✓

## ACID RAIN (अम्लीय वर्षा)

Acid rain is mixing up / dissolving of oxide of  $\text{NO}_2$  and  $\text{S}$  with rain water. This reduces the pH of rain water and makes it acidic.

Causes:- Gaseous discharge from industries, automobile exhaust, burning of fossil fuels etc.

Effects:- kills soils microbes, affects aquatic life, marble building are damaged.

## Tissue Culture

As traditional breeding techniques failed to keep pace with demand to provide sufficiently fast and efficient systems for crop improvement, another technology called tissue culture got developed. Tissue culture learnt by scientists, during 1950s, that whole plants could be regenerated from explants, etc. any part of a plant taken out and grown in a test tube, under sterile conditions

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in special nutrients media. This capacity to generate a whole plant from any cell/explant is called totipotency.

### B-Lymphocytes and T-Lymphocytes

The primary and secondary immune responses are carried out with help of two special types of lymphocytes present in our body blood, i.e. B-lymphocytes and T-lymphocytes. The B-lymphocytes produce an army of proteins in response to pathogens into our blood to fight with them. These proteins are called antibodies. The T-cells themselves do not secrete antibodies but help B cells produce them. Each antibody molecule has four peptide chains, two small called light chains and two longer called heavy chains. Hence an antibody is represented as  $H_2L_2$ . Different types of antibodies are produced in our body. IgA, IgM, IgE, IgG are some of them.

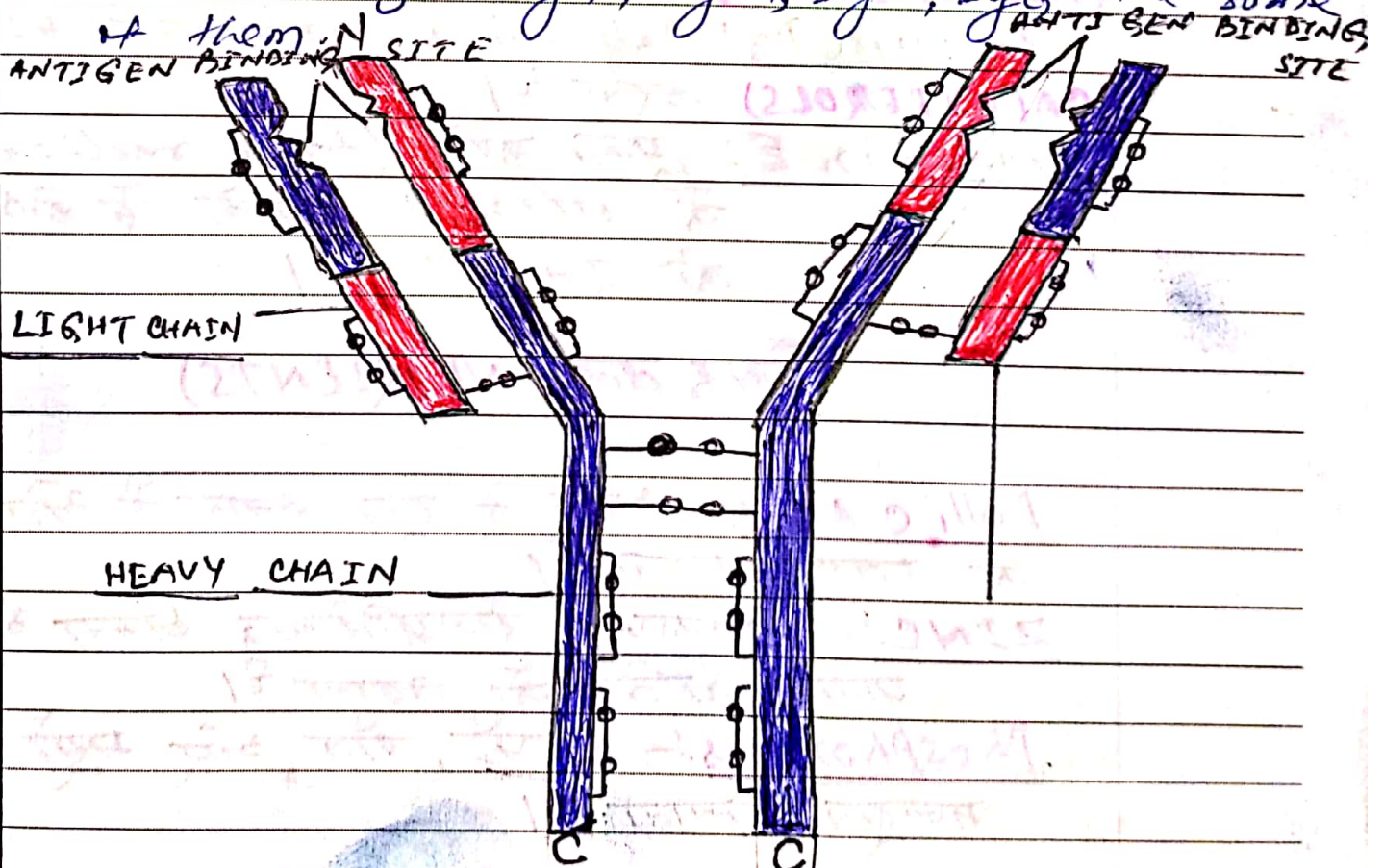


Fig: Structure of an antibody molecule