

Explain

Topic:-

By:- Aniket
Kumar

Page No. 1

Eubacteria.

* Introduction:- Eubacteria better known as Bacteria (or true Bacteria) are single-celled micro-organisms, that belong to a Domain Bacteria.

⇒ With 40 million Bacterial cells per gram of soil, Eubacteria are one of the most numerous living things on the planet.

⇒ There are 4000 species of Bacteria that can be found all over the world, including the areas with extreme conditions, such as volcanoes, areas covered with radioactive waste and deep layers of the Earth's crust.

⇒ * General characteristic features:-

(1) Eubacteria can be spherical (Cocci), spiral (Spirilla), tightly coiled (Spirochaetes) or rod-shaped (Bacilli) and 0.5 to 5 mm long (micrometre).

⇒ Eubacteria can be found as individual cells or in the large colonies shaped like tight coils, grape like clusters, filaments etc.

⇒ Some eubacteria are equipped with cilia

and flagella which are used for movement.

② Eubacteria do not have nucleus and cell-organelles.

⇒ They have single circular DNA and numerous plasmids (small circular pieces of DNA) in cytoplasm and cell-wall made of chains of peptidoglycan.

⇒ Additional layer of lipids and sugar around the cell-wall can be found in Gram Negative Bacteria (term "negative" refers to their inability to absorb Gram stain i.e. used for dyeing of Bacteria).

③ This type of Bacteria is harmful for humans and animals due to potent toxin (endotoxin) incorporated in the lipopolysaccharide layer.

④ Eubacteria can be autotrophic (able to produce food on their own) or heterotrophic (they consume organic compounds produced by other organisms).

⑤ Some Eubacteria metabolise ("digest") remains of plants and animals and release valuable nutrients into the ground.

Explain by:- Aniket Kumer - Page No. 3 - Topic:- Eubacteria

(6) Nitrogen-fixing eubacteria absorb atmospheric nitrogen and convert it into nitrates, plant-friendly form of nitrogen.

(7) Eubacteria are used in the manufacture of cheese, curd, vinegar, yogurt, wine and for pickling.

(8) Eubacteria in the human gut play an important role in digestion of food and synthesis of vitamin K.

(9) They also protect human body from harmful bacteria.

(10) Some eubacteria can induce serious diseases such as Tuberculosis, meningitis, Leprosy, Anthrax, Cholera and Tetanus etc.

Topic:- Eubacteria.

Page No 4 Prepared By:- Aniket Kumar

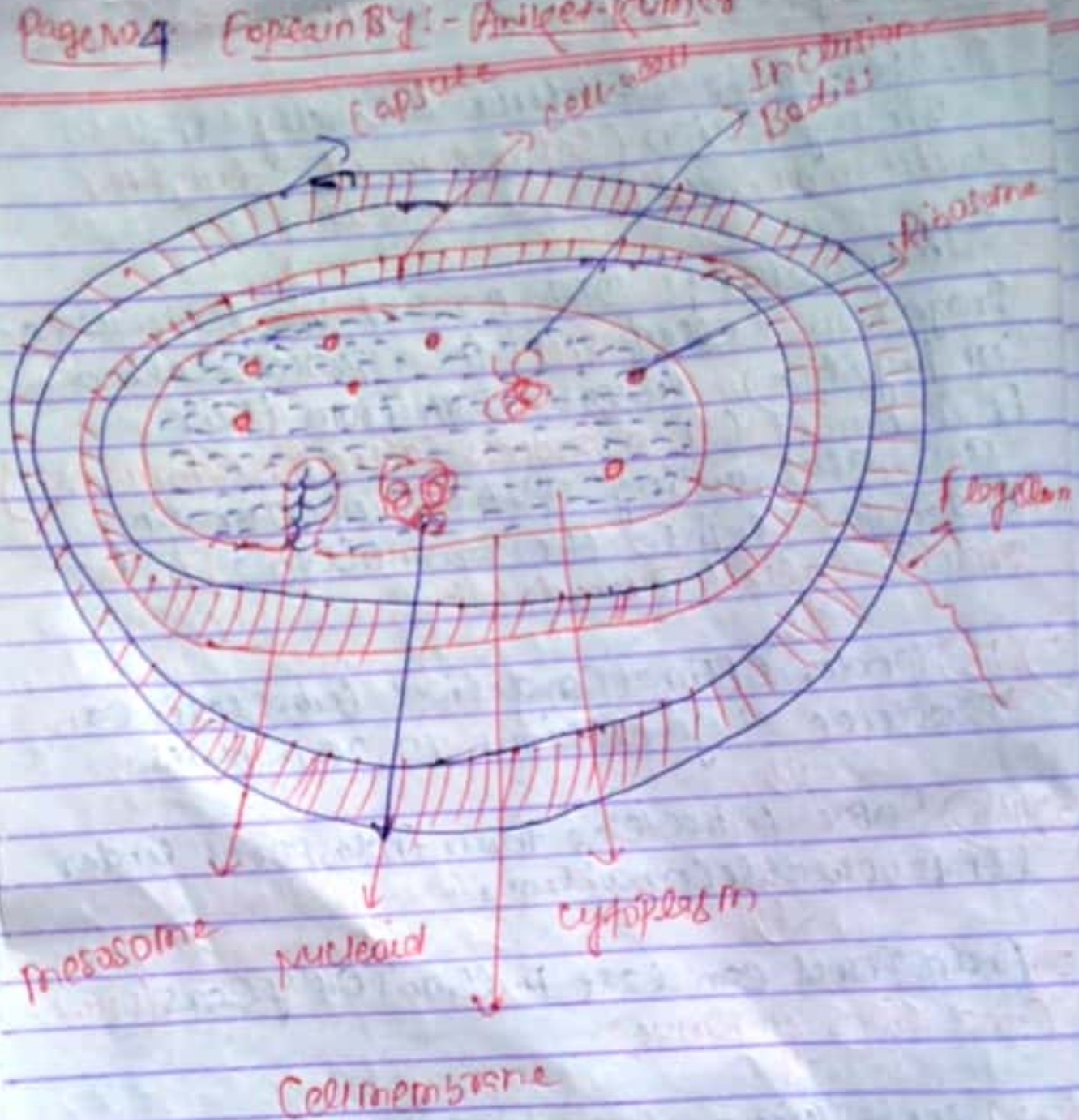


Fig:- Ultrastructure of Eubacterial Cell

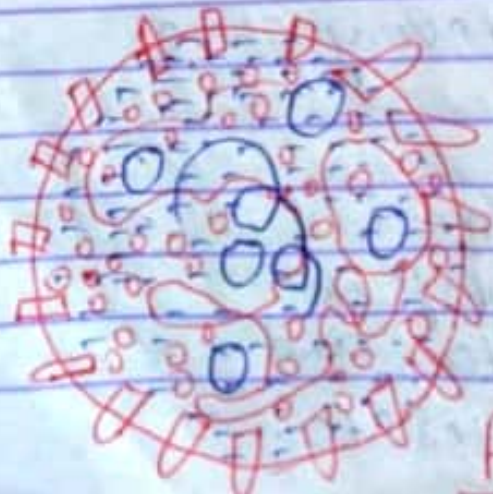


Fig:- Mycoplasma