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B.Sc. PART I SUB/GEN
Theory

CORE CONCEPT OF

Group-A, microbiology.

Shape - In the form of *Staphylococcus* or in the form of a cubes (*Sarcina*) All cocci forms lack flagella.

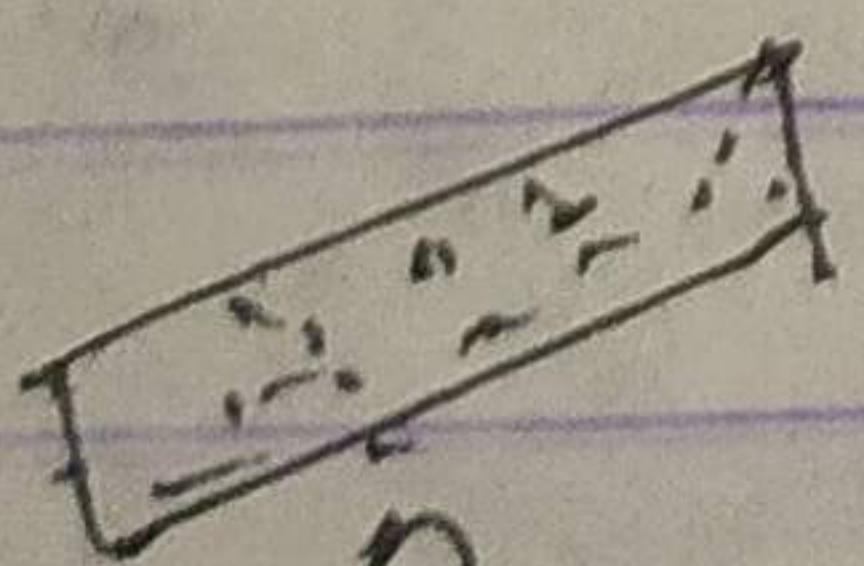
(ii) Rod-shaped (Also known as *bacilli*). They may occur singly in groups of two (*diplobacillus*) or in chain (*streptobacillus*).

(iii) Helical or Spiral - These are of two types -

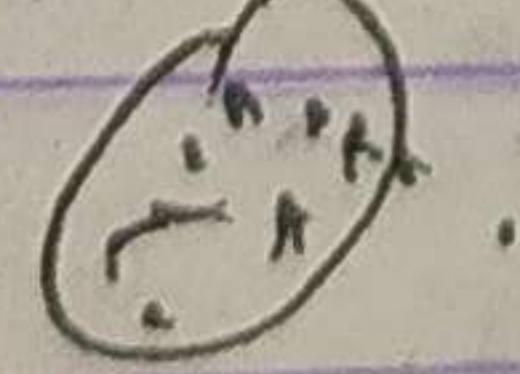
(a) *spiroilla* - Body is twisted spirally like a "cork-screw".

(b) *vibrios* - These are short curved rods or comma-shaped.

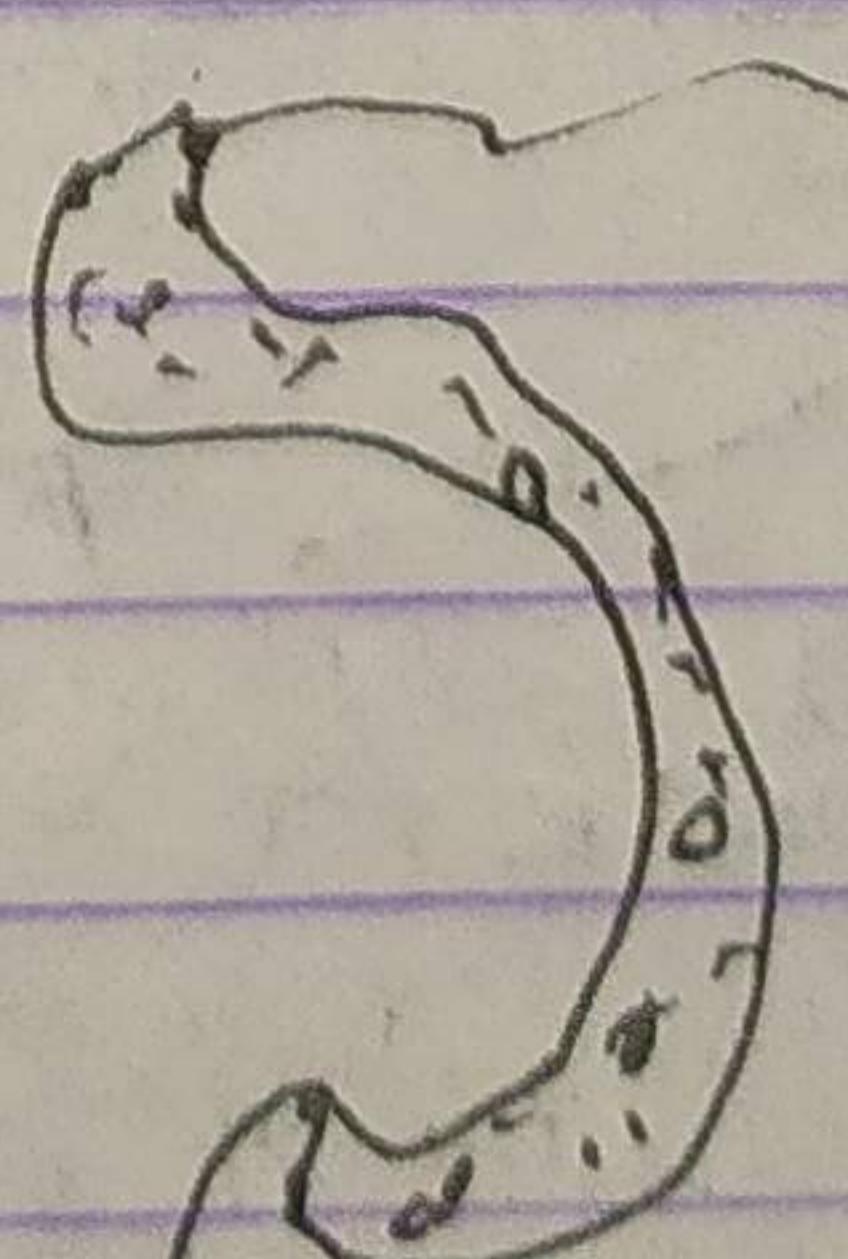
Some bacteria are able to change their shape and size and are called pleomorphic bacteria.



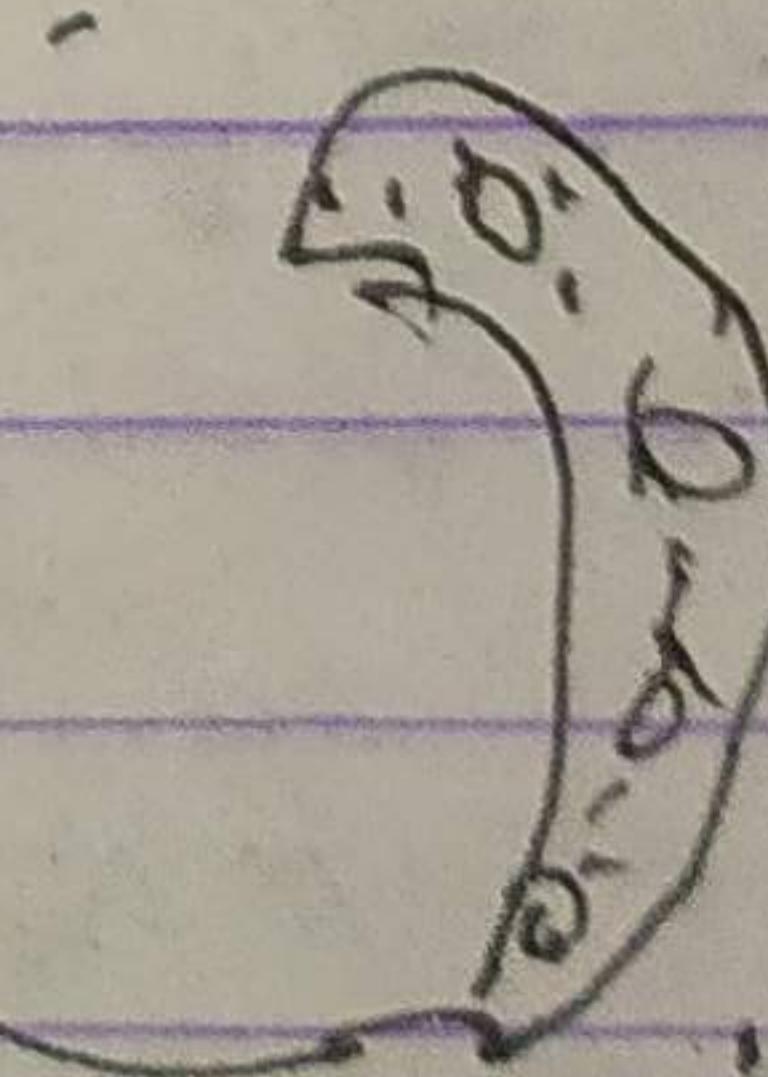
Bacillus



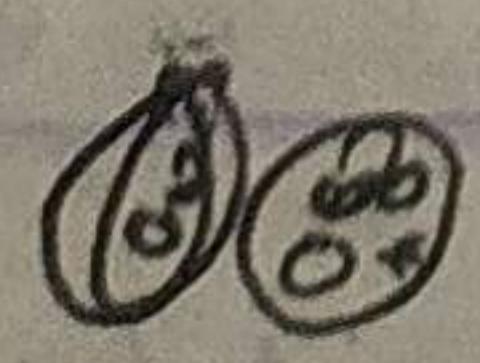
micrococcus



Spiroillum



vibrio



Diplococcus

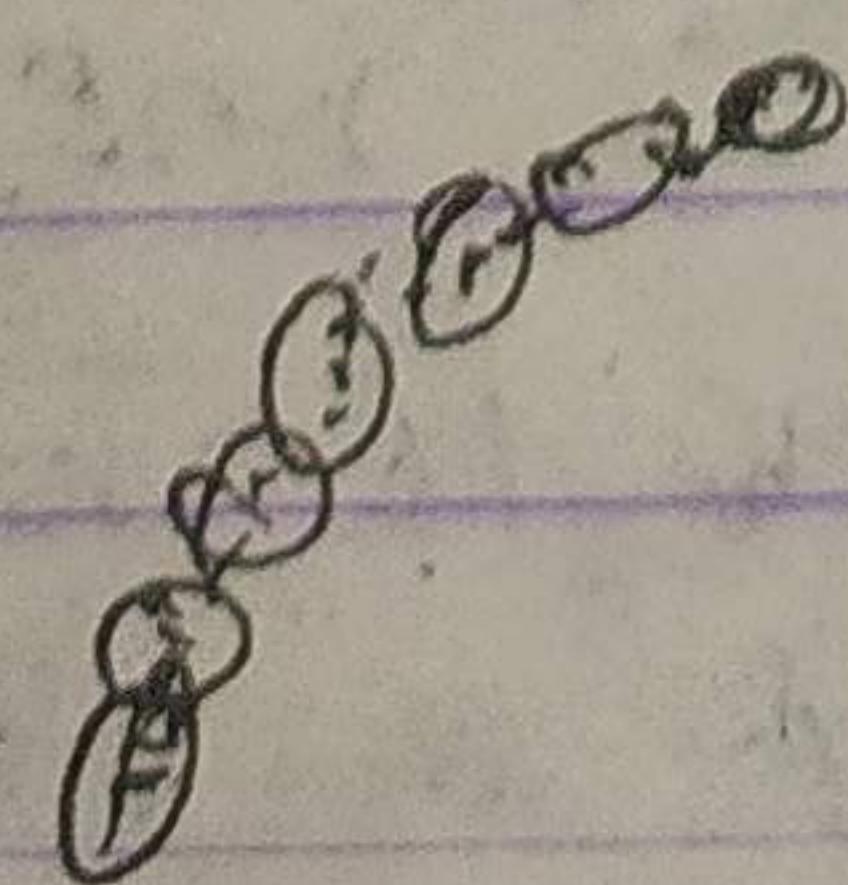
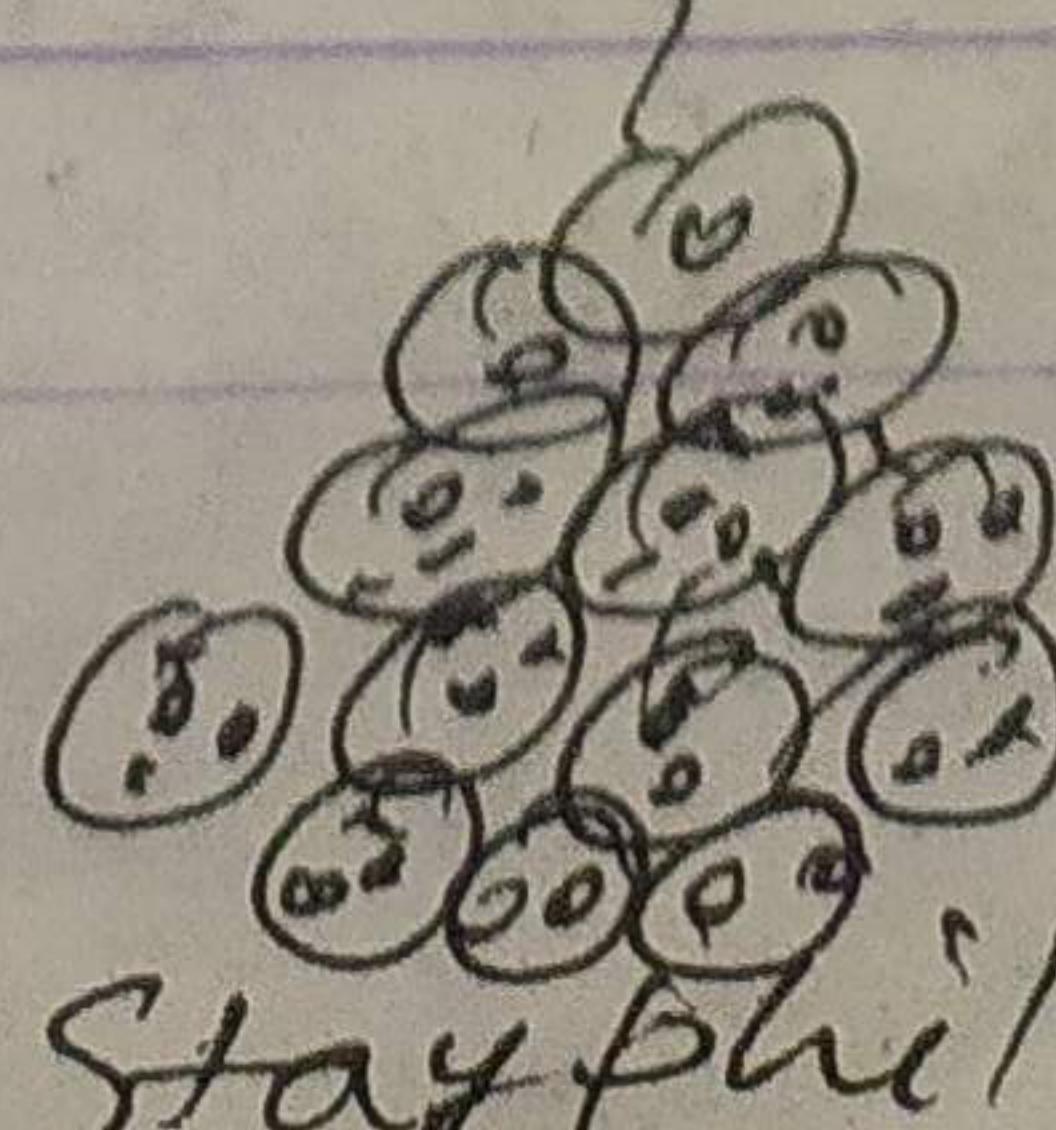
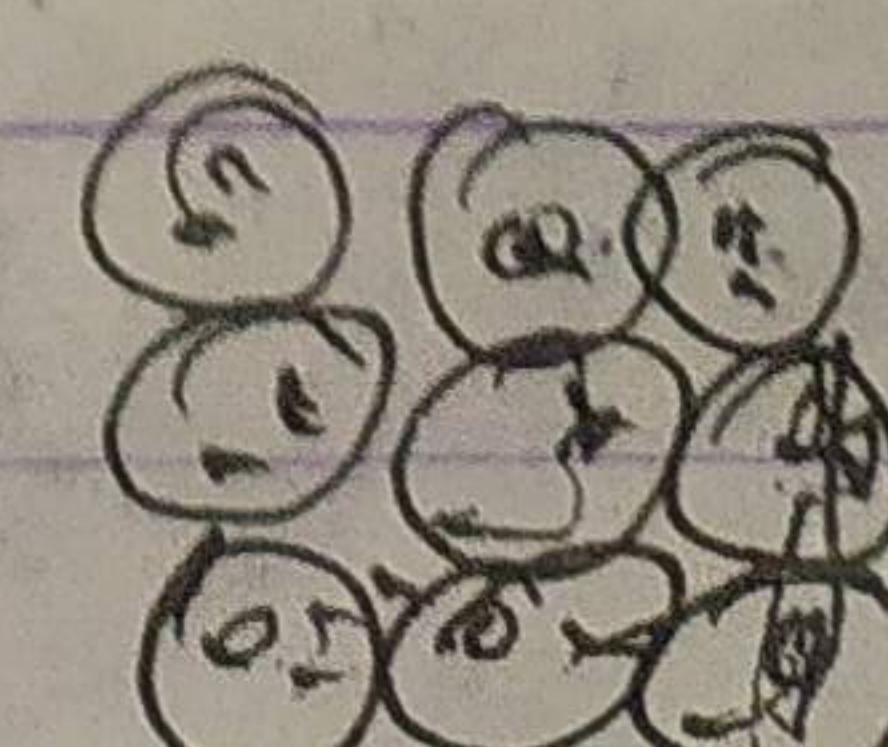


Fig - Types of bacteria.
of *Streptococcus*



Staphylococcus



Sarcina

2.

Cell Structure: The bacterial cell comprise of cell-wall and protoplasm. A thin layer of slime is present external to the cell wall which under certain circumstances accumulates to the form a thick capsule. It is composed of polysaccharides. The capsulated bacteria are very resistant to adverse conditions and such bacteria are commonly the cause of diseases (pathogenic).

The cell wall is composed of acetylglucosamine and acetylmuramic acid.

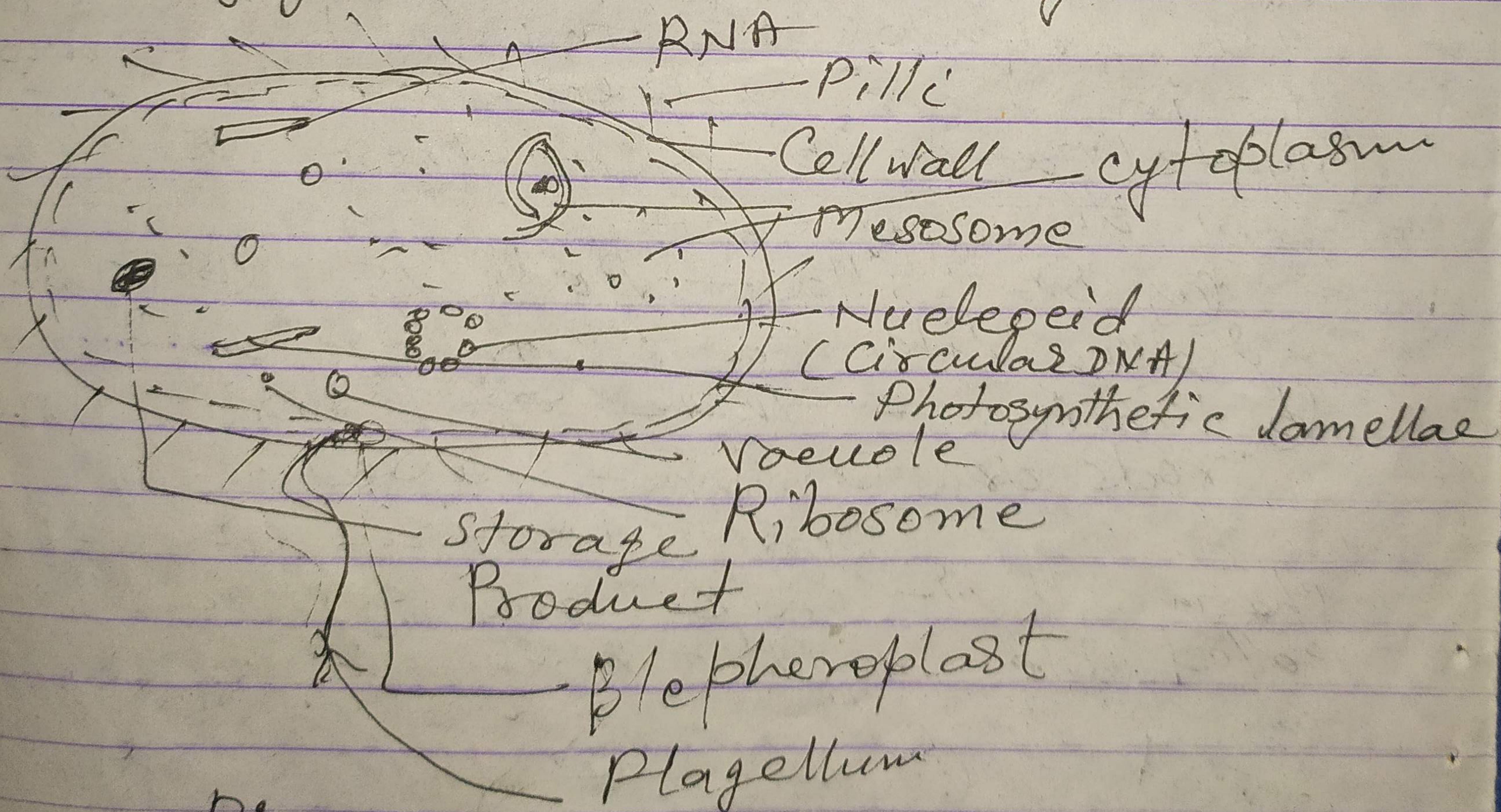


Fig - Bacterial Cell Structure.

The amino acid which is most frequent in cell walls is diaminopimelic acid. Teichoic acids have been reported