

Biology - FSC Part 1 Biology English Medium Chapter 6 Preparation

Q1. What are akinetes? Give their functions.

Ans 1: Akinetes are thick walled, enlarged vegetative cells which accumulate food and become resting cells. On the onset of favourable conditions they form normal vegetative cells.

Q2. What are Gram positive bacteria?

Ans 1: Gram positive bacteria stain purple (retain primary dye due to formation of CV-I complex (crystal violet-iodine).)

Q3. What are antiseptics?

Ans 1: Chemical substances used on living tissues that inhibit the growth of microorganisms are called antiseptics e.g. spirit.

Q4. Differentiate between Amphitrichous and Peritrichous bacteria.

Ans 1: Amphitrichous: Amphitrichous is a condition when tuft of flagella at each two poles of bacteria is present.

Ans 2: Peritrichous: In Peritrichous flagella surround the whole bacterial cell.

Q5. What are trichomes? Give the structure and function of heterocyst.

Ans 1: In Nostoc cells are arranged in chains and covered by mucilage sheath called trichome.

Heterocyst: All cells in trichome are mostly similar in structure but at regular interval are found slightly large, round, light yellow thick walled cells known as heterocysts. Trichome mostly break near heterocyst and form hormogonia. So heterocysts help in fermentation. Nitrogen fixation also takes place in heterocysts.

Q6. Differentiate between flagellum and flagellin.

Ans 1: Flagellum: These are extremely thin hair-like appendages found in bacteria. Their primary function is in motility. Flagellum is singular plural is flagella.

Ans 2: Flagellin: Flagellin is made up of flagellin protein.

Q7. Write down the classification of bacteria on the basis of shapes.

Ans 1: On the basis of general shapes, bacteria are classified into following three categories.

1. Cocci

2. Bacilli
3. Spirillum

Q8. What is conjugation?

Ans 1: Two bacteria joined by side and tube like structure called conjugation tube is formed between them and then they exchange their genetic material this process is called conjugation.

Q9. What are mesosomes in bacteria? Give also function.

Ans 1: Bacterial cell membrane invagilates into cytoplasm forming structure called as mesosomes; Mesosomes are in the form of vesicles, tubules and lamellae. Mesosomes are involved in DNA replication and cell divisions where as some mesosomes are involved in the export of exocellular enzymes. Respiratory enzymes are also present on the mesosomes.

Q10. Differentiate between Lophotrichous and Amphitrichous.

Ans 1: Lophotrichous: When tuft of flagella is present only at one pole of bacteria.

Ans 2: Amphitrichous When tuft of flagella at each of two poles is present.
