ACTIVITY 5

STUDY OF NOSTOC FROM FRESH MATERIAL AND PERMANENT SLIDE

Preparation of Slide:

(i) Take a colony of ***Nostoc*** on a slide.

(ii) Cover the material with cover slip and observe under microscope.

Characters of Nostoc:

1. ***Nostoc*** belongs to the class **cyanophyceae** of group **algae**. It is found in fresh water ponds, streams, lakes etc.
2. The body of ***Nostoc*** is called **Thallus**. It is very simple in structure.
3. The thallus consists of many thread like bodies known as filaments.
4. Each filament is unbranched and composed of many spherical cells, which are arranged in beaded form.
5. All the cells are similer in structure.
6. The whole filament is covered by a gelatinous sheath, which protects the filament.
7. In the filament of ***Nostoc*** some larger, light yellowish and thick-walled cells are also present, called **heterocysts**.
8. The heterocysts take part in **reproduction** and nitrogen **fixation**.
9. Each cell is spherical in shape. It is covered by an outer wall, called **cell wall.**
10. The cytoplasm of cell consists of two parts, the outer part along the cell wall is called **chromoplasm**. It is coloured part, contains blue-green pigments. This part also manufactures food material.
11. The inner part of cytoplasm is called **centroplasm**. It is colourless but it stores food material.
12. In the cell of ***Nostoc*** a true nucleus is absent, but the central body acts like a nucleus and controls all the functions. It is also called **incepient nucleus.**
13. Due to the presence of incomplete nucleus the cell of ***Nostoc*** is considered as a **prokaryotic cell.**

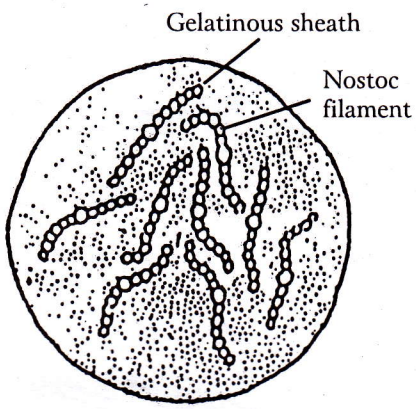

Fig. 6: Portion of Colony Under Lower Power

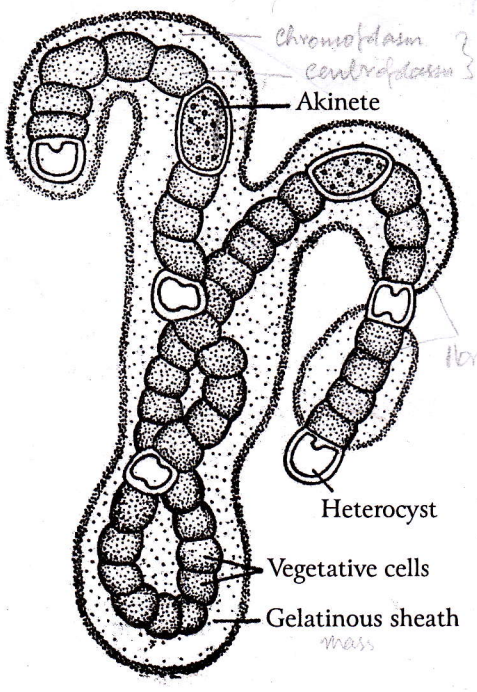

Fig. 7: Nostoc Filament