

1) What is parasite?

Parasite is ~~an~~ a living organism which receives nourishment and shelter from another organism belonging to different species where it lives.
e.g. Ascaris lumbricoides is parasite of human being.

2) What is host?

Host is a organism which harbours of parasite.
e.g. Human being is the host of Ascaris lumbricoides

3) Name at least two Anopheles species which acts as intermediate host of Plasmodium vivax.
Anopheles stephensi, Anopheles philippinensis, A. culicifacies.

4) Name the causative organism of Amoebic dysentery.
Entamoeba histolytica.

5) Which stage of Entamoeba histolytica is infective to man?
Ans: Cystic stage.

Marks :- 5
Describe the ultra-microscopic structure of ookinete and Sporozoite

Ookinete:

- 1) It is enclosed in 2 layered envelope, consisting of an outer corrugated and inner smooth layer.
- 2) Anteriorly the inner layer appears more dense and to split, producing what looks like a mouth.
- 3) Just internal to the envelope lie the hollow peripheral fibrils, 55 to 65 in number.
- 4) There is a granular nucleus with nucleolus.
- 5) There is no micropyle.
- 6) Among cytoplasmic inclusions are crystalloid structures, mitochondria, lysosomes and irregular masses of black pigment granules lying in vacuoles of the cytoplasm.

Fig: (From K. D. Chatterjee Parasitology)

Sporozoite:

- 1) There is a thick double membrane, the outer corrugated and inner stout.
- 2) At the anterior end, there is a cup-like structure lying in an apical depression.
- 3) 12 hollow peripheral fibrils are attached to the cup. These fibrils are found to be contractile or tensile in function, these have a locomotory function.

4) A long bulbous paired organelle, presumed to secrete a proteolytic enzyme to facilitate sporozoite's penetration of cells in both hosts.

5) ~~There is no microphyle~~

6) ~~Among cytoplasmic inclusions~~

5) The nucleus lies in a well-marked pit, microphyle.

6) Inside the cytoplasm are numerous mitochondria, which provide a source of energy.

7) The pellicle consists of 3 layers and an intermediate zone can be distinguished. The pellicle is continuous over the whole organism.

8) The anterior end is more elaborate with concentric rings in human form.

9) The peripheral fibrils in P. vivax are 11 (10+1)
Fig (from Dr. K.D. Chatterjee's Parasitology book.)

Marks - 10.

What is conjugation? Describe the process of conjugation in Paramecium caudatum.

Ans Conjugation is a process of reproduction of ~~Paramecium~~ Paramecium of different mating type by which two individuals unite temporarily to form a common continuous protoplasmic bridge between them and exchange of nuclear material takes place between them. On getting nuclear exchange two individual become separate and divide to multiply their number.