

Assignment No-1

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Std - Ty Bsc

Roll No -

Subject - Parasitology

Very level

Q.1. Write a short notes on:

i) commensalism -

- The term commensalism literally mean's eating at the same table, it is a loose form of association for getting shelter, food and difence.

- commensation involves an unbalanced relationship often benefiting one of the partners, the other remaining unbenefited and unharmed.

- When two or more animals live together and if there is no physiological dependence between them, they are referred to as commensals.

- commensals which are simply attached to the outer surface of host are called as ectocommensals.

ii) Mutualism -

- It is an interesecting type of symbiotic relationship, where by both the partners of the association are benefited.

- The association may be continuous, transitory, obligate or facultative.

- The animals show metabolic interdependence hence they live together for their existence.

The classical example of mutualism is wood eating termites and presence of flagellate protozoans in their alimentary canal.

- Termites feed on wood, cotton, wool etc containing cellulose.
- It is not digested by termites, however the flagellates are capable of secreting cellulolytic digestive enzyme cellulase.

iii) Definitive Host -

- The host in which the parasites becomes adult and reaches maturity and passes its sexual reproduction is called definitive host.

- There are parasites in which only one host is present and the life-cycle only of the parasite is completed in the body of that host.

- There are number of parasites which complete their life-cycle in body of two hosts, hence the host are two types. one definitive host and another intermediate host.

- This protozoan parasite produces male and female gametocytes in human blood but formation of mature gametes and actual fertilization occurs in the stomach of the mosquito.

iv) Intermediate Host -

- The host than definitive host in which a developmental phase such as asexual or larval development is passed.

- Mosquito is the intermediate or secondary host of malarial parasite.

- Intermediate hosts are essential for the larval stages of parasite in which structural and functional changes occur and they become highly infective.

- This type of host serves only an ecological function of transmission and dispersal.

2. Give an account of scope and branches of Parasitology.

→ It is branch of medical science which deals with parasites found in man, their morphology, life cycle and their pathogenic effects. Sometimes this branch is also called medical Parasitology and it is treated as branch of microbiology. It deals with harmful bacteria, viruses and protozoans.

Branches of parasitology.

1] Medical Protozoology -

✓ It is the branch of science which deals with the study of Protozoal parasites consists of a single cells like unit which is morphologically and functionally complete.

2] Medical Helminthology -

✓ It is branch of medical science which deals with the study of helminth parasite of medical importance to human beings.

3] Medical Entomology -

It is branch of science which deals with the study of harmful insects to man and his domestic animals, their morphology, life cycle and pathogenic effects or diseases caused by them.

4] Forensic Entomology -

It is branch of applied entomology in which study of insect and other arthropods found on or on humans bodies suspected of active to help investigation and initiation of civil proceedings.

Q.3] What is host specificity? Give an account of various types of host specificity.

→ Host specificity is defined as the adaptability of a species of parasite to a certain species of group of hosts or host.

Types of Host Specificity -

Host specificity can be categorized into two types, however, there are three types, they are as follows.

1] Structural specificity -

The structural or morphological adaptation of a parasite to its host is called structural or morphological host specificity.

2] Physiological specificity -

✓ The Physiological ~~ability~~ of a parasite to its micro environment on or in the body of host is called physiological host specificity.

3] Ecological host specificity -

✓ The ability of a parasite to infect a compatible host as the result of ecological opportunity is called ecological specificity.

Review