

6. BIOLOGY IN HUMAN WELFARE

$(1 \times 2) + (1 \times 4) + (1 \times 8) = 14$ Marks

ROOT POINTS

1. **Biological knowledge** is very useful to human welfare, medical field, agriculture.
2. Biology helps us to face various types of parasitic, bacterial, viral, fungal and other infections.
3. Biology educates people on the abuse of tobacco, drugs, alcohol etc.,
4. **Parasitism** is intimate association of two individuals of which one is benefited and the other is harmed. [IPE]
5. A parasite which lives on the body of the another parasite is called **hyper-parasite**. [IPE]
6. Degeneration of gonads (testis) of the host due to presence of a parasite is [IPE] called **parasitic castration**. **Ex:** Sacculina causes degeneration of ovaries in the crabs.
7. **Incubation period:** The period between the entry of sporozoites into blood of a man and appearance of clinical symptoms of malaria is called incubation period. It is about 10-14 days.
8. Migration of sheathed microfilaria larva from deeper vessels to peripheral blood vessels during night sleeping time between 10.00 PM and 4 AM is referred to as **nocturnal periodicity**. [IPE]
9. **Tobacco** contains Nicotine which stimulates adrenal glands. [IPE]
10. **TDA** stands for **Teenage Drug Abuse**.
The proverb, 'Prevention is better than cure' holds true in case of TDA abuse. [IPE]
11. **Life cycle of E histolytica:** (i) Trophozoite stage (ii) Precystic stage (iii) Cystic stage. [IPE]
12. **Life cycle of Plasmodium in man:** [IPE]
(a) **Hepatic schizogony:** (i) Pre-erythrocytic cycle (ii) Exo-erythrocytic cycle (iii) Prepatent period
(b) **Erythrocytic schizogony:** (i) Gogli cycle (ii) Incubation period (iii) Formation of Gametocytes
13. **Life cycle of Plasmodium in mosquito-Ross cycle:** [IPE]
1. Gametogony: (i) Formation of male gametes (ii) Formation of female gamete
2. Fertilization 3. Formation of Ookinetic & Oocysts 4. Sporogony

14. Structure and Life cycle of Ascaris lumbricoides:

[IPE]

- (i) Common round worm lives in the intestine of man (mostly children)
- (ii) Mode of infection is through contaminated food and water.
- (iii) In both males and females, the body is elongated and cylindrical.
- (iv) In both forms mouth is at the anterior end surrounded by Chitinous lips.
- (v) After copulation in the small intestine the female releases about two lakh eggs daily.
- (vi) Each egg is surrounded by a rippled protein coat and hence it is called mammillated egg.
- (vii) **Pathogenicity:** Ascaris causes ascariasis.

FRUITY Qs OF IPE**(1 x 2) + (1 x 4) + (1 x 8) = 14 Marks**

1. What do you mean by parasitic castration? Give one example.
2. Define neoplasia. Give one example.
3. The eggs of Ascaris are called 'mammillated eggs'. Justify.
4. What is meant by nocturnal periodicity with reference to the life history of a nematode parasite you have studied?
5. Define drug abuse.
6. From which substances 'Smack' and 'Coke' are obtained?
7. Distinguish between hypertrophy and hyperplasia with an example for each.
8. What are the adverse effects of tobacco?
9. Why in adolescence is considered vulnerable phase?
10. 'Prevention is better than cure'. Justify with regard to TDA abuse.
11. Explain the structure and life cycle of Entamoeba histolytica with the help of neat labelled diagrams.
12. Describe the life cycle of Plasmodium vivax in man.
13. Describe the life cycle of Plasmodium vivax in mosquito.
14. Describe the structure and life cycle of Ascaris lumbricoides with the help of a neat labelled diagram.