

KEY FOR QUESTION PAPER-APPLIED ZOOLOGY[ZL/ME/AZ24]

SECTION-A

ANSWER ALL QUESTIONS

(10 X 3 = 30)

1. Mention one useful product that can be obtained from the following organism
a) *Apis indica* -Honey b) *Bombyx mori meridionalis* -Silk c) *Kerria lacca* -Lac
2. Name the host plant of the following pest
a) *Chilo infuscatellus* -Sugarcane b) *Tryporyza incertulas* -Rice
c) *Earias vitella*-Cotton
3. Give the application of the following
a) Honey Extractor-It is used for the extraction of the honey from the comb and function on the principle of centrifugal force. When combs are centrifuged by this device the pure honey is thrown out without any damage to the comb.
b) Chandraki –or cocoonage is a circular basket with a spiral wall about 5cm width to facilitate the silkworm to attach their cocoons to them.
c) Hapas- are rectangular trough shaped tanks made up of cloth supported by bamboo poles fixed in the river. In these hapas fish eggs are aerated by continuous flow of water current.
4. State any three direct uses of Mammals.
a) Agriculture-Mammals like ox, buffalo, camel etc are used for tilling the soil.
b) Transport-Mammals such as horses, ox, camel buffaloes and elephants are used as transport either in carts or as such.
c) Predators of pest-Cats and Mongoos are predatory on rats which are a serious pest of the stored grains.
5. Name any 3 common disease of the silk moth.
a) Pebrine-caused by *Nosema bombycis*.
b) Flacheria- caused by a bacteria *Bacillus bombysepticus*
c) Muscardine- is a fungal disease caused by *Beauveria bassiana*.
6. Give any 3 economic importance of snake venom.
a)Used for the manufacture of Antivenin.
b)Used for relieving muscular pain.
c) To treat patients suffering from neural leprosy.
7. Explain any three methods of preservation of fish. (Any 3 -1 mark each)
a)Refrigeration-The fish is preserved at 0 degree centigrade which prevent the spoilage for short period. For this purpose alternate layers of fish and ice are kept in closed vessels to maintain the temperature at 0 degree centigrade.
b) Sun Drying-Small sized fishes are dried in sun light especially in tropical countries. The fishes are kept on mats for dehydration for 3 to 5 days during this period the fish is constantly turned.
c) Smoking-The preservation by the action of wood smoke is known as smoking. Deep-Freezing, Freeze drying, Sun Curing, Mona Curing, Wet Curing, Salting, Canning.
8. Explain the following

- a) Antifeedant – Chemicals which inhibit feeding in insects.
 - b) Culling- is a process of eliminating undersirable birds or those birds which do not possess the qualities of giving enough benefit in return for their culture.
 - c) Stiffling- Before the silkworm emergences from their cocoon they are killed by exposing to the sun for two or three days or passing steam or hot air over them or by fumigating with chemicals.
9. State the effect of pesticide on soil and soil fauna.
- a) It increases the salinity of the soil.
 - b) It kills the soil microbes thereby reducing soil fertility.
 - c) It changes the physical structure of the soil as a result leading to desertification condition making the soil unfit for agriculture.
10. Expand the following
- a) DDT-Dichlorodiphenyltrichloroethane
 - b) HCN-Hydrogen Cyanide
 - c) BHC-Benzene Hexachloride

SECTION –B

ANSWER ANY FIVE QUESTIONS

(5 X 6 =30)

11. Classify insecticide based on their mode of entry and mode of action.
 Classification based on the mode of entry-Stomach Poison, Contact Poison, Fumigant-3 marks.
 Classification based on the mode of action-Physical poison, Protoplasmic poison, Respiratory poison and Nerve poison- 3 marks.
12. Describe the biology, nature of damage and control measure of any three pest of rice.
 Any 3 pest -2 marks each (Biology-1; Damage-1/2; control-1/2)
13. Discuss the methods of Induced Breeding by Hypophysation method.
 Definition for induced breeding-1 mark; Hormones used-2 marks; Method-3 mark
14. State the economic importance of the Dairy and Leather industry.
 Any 3 economic importance for Dairy-1 mark each [3 mark]
 Any 3 economic importance for Leather-1 mark each [3 mark]
15. How is Lac processed? Mention about the uses of lac.
 Method of processing of Lac-4 marks.
 Uses of Lac- 2 marks.
16. Briefly explain the various methods of housing of fowls.
 Semi intensive method-2 mark
 Intensive Method- Deep Litter System-2 mark; Individual cage system-2 mark.
17. What is Biological control? Explain with suitable examples. State its advantages and Limitations.
 Definition-1 mark; examples-(Bacteria, Predators, Virus, Fungi) 2 mark
 Advantages and limitations-3 marks.

SECTION- C

ANSWER ANY TWO QUESTIONS

(2 X 20 =40)

18. Describe the concept of IPM with reference to any one crop.
Definition of IPM-2 marks. Cultural, Physical, Mechanical, Legal, Biological, Chemical methods of control-12(2 marks each) Recent trends in pest control -6 marks.
19. Give an account of major carp culture. Briefly explain the recent trends in aquaculture.
Various methods in Carp Culture-10 marks. Recent trends in Aquaculture-10 marks.
20. “Vermicomposting is the technology for solid waste management”. Justify.
Methods to set up a vermicompost unit-10 marks; Its utilization in solid waste management-10 marks.
21. Discuss in detail the Sericulture Industry and add a note on its importance.
Types of Silkworm-3 marks; Host Plant-2 marks; Life cycle of silk moth -5 marks; Rearing of silkworm-6 marks; uses of silk- 4 marks.