M.Sc. ZOOLOGY
FOURTH SEMESTER
ECONOMIC ZOOLOGY
MSZ-406 (MDC)

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs. Full Marks : 70

[PART-A : Objective]

Time : 20 min. Marks : 20

Choose the correct answer from the following: *1X20=20*

1. Swarming phenomena is found in:
   a. Eri silk worm
   b. Muga silk worm
   c. Honey bee
   d. Lac insect

2. Primary host plant of Eri Silk worm is:
   a. Castor
   b. Som
   c. Sualu
   d. Tapioca

3. Which of the following silk is an "Ahimsa Silk"?
   a. Eri Silk
   b. Muga silk
   c. Tasar Silk
   d. Eri & Muga Silk

4. Which of the silkworm cocoons cannot be reeled?
   a. Muga cocoon
   b. Eri Cocoon
   c. Tasar cocoon
   d. Eri & Tasar Cocoon

5. Which of the following is/are bee product?
   a. Be wax
   b. Propolis
   c. Royal Jelly
   d. All the above

6. Stored grain pests are found in:
   a. Tea garden
   b. Inside the bark
   c. Paddy field
   d. Store house

7. Heartwood borer insects are:
   a. Internal feeders
   b. Defoliators
   c. Bark eaters
   d. None of these

8. Bunch caterpillar is a major pest of:
   a. Paddy
   b. Stored grain
   c. Tea
   d. Forest

9. For farmer, natural enemies of insects are:
   a. Friends
   b. Relatives
   c. Enemies
   d. Miscreant

10. Key pest species are:
    a. Always remain in the field
    b. Occasionally visit the field
    c. Appear for laying egg only
    d. Migrate from other places

11. Application of lime:
    a. Increases pH
    b. Increases as well as decreases the pH
    c. Decreases pH
    d. None of the above

12. Generally fish production increases with:
    a. The increase in the stocking density per unit area.
    b. The decrease in stocking density per unit area.
    c. The increase first followed by decrease in stocking density per unit area.
    d. All of the above.

13. Supplementary feed for fishes in composite fish culture can be given at:
    a. Ratio of 1:1 @5% of the total body weight of fish.
    b. Ratio of 3:1 @9% of the total body weight of fish.
    c. Ratio of 3:3 @10% of the total body weight of fish.
    d. Ratio of 1:3 @2 % of the total body weight of fish.

14. The principle of integrated fish farming involves:
    a. Farming of fish along with livestock or/and agricultural crops.
    b. Farming of fish only.
    c. Farming of livestock only.
    d. All of the above.

15. The droppings of chicks would fertilize fish ponds rich in:
    a. Nitrogen and phosphorus
    b. Sulphur
    c. Silicate
    d. Ammonium

16. The parasite which cannot exist without a host called:
    a. Obligate parasite
    b. Facultative parasite
    c. Accidental parasite
    d. Aberrant parasite

17. The host in which the adult parasite lives and undergoes sexual reproduction is called:
    a. Paratenic host
    b. Intermediate host
    c. Definitive host
    d. Reservoir host

18. Vector of the malarial disease in human-being is:
    a. *Anopheles*
    b. *Culex*
    c. *Aedes*
    d. *Culex* & *Aedes*

19. The period between taking blood meal and laying eggs by female mosquito is called:
    a. Incubation period
    b. Gonadotrophic Period
    c. Gestation period
    d. Ganotrophic cycle

20. The mosquito belonging to the genus *Culex* is the vector of:
    a. Malaria
    b. Filariasis
    c. Lishminiasis
    d. AIDS

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(PART-B : Descriptive)

Time : 2 hrs. 40 min. **Marks : 50**

[Answer question no.1 & any four (4) from the rest]

1. Write short notes: (*any two*) 5+5=10
   (a) Paddy cum fish culture in Northeast India.
   (b) Insect Pests as internal feeder.
   (c) Different types of Host of Parasites.

2. What are the host plants of Lac Insects? Describe the different uses of lac. 2+8=10

3. What are the honey bee species found in India? Write about general management of honey bee. 2+8=10

4. Define pest. Write a note on any one of the tea or paddy pest. 2+8=10

5. What do you mean by pesticides? Write briefly its hazardous activities on human health. 2+8=10

6. What is composite fish culture? What are the principles of composite fish culture? In the light of the modern concept discuss the recent practices of composite fish culture practices in India. 1+2+7=10

7. What is integrated fish farming? Mention some of the different types of integrated fish farming practiced in India. 2+8=10

8. What is Filariasis? Describe the biology of the vector of Filariasis-*Culex* mosquito. 2+8=10

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