

# RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. SIXTH SEMESTER EXAMINATION, MAY 2023

THIRD YEAR [BATCH 2020-23]

ZOOLOGY [HONOURS]

Paper : CC14

Date : 15/05/2023

Time : 11 am – 1 pm

Full Marks : 50

1. Answer **any five** questions :

[5 × 2]

- i) Name a host plant for each of Kusum and Rangini strains of lac insects.
- ii) Describe the importance of Royal Jelly? State the possible molecular mechanism.
- iii) What is Altruism? Give example.
- iv) Identify the type of data (nominal, ordinal, interval and ratio) represented by each of the followings.  
a) Blood Group, b) Temperature, c) Ethnic group, d) Number of heart attacks, e) Calendar year, f) Serum uric acid (mg/100ml)
- v) What is alloparental care?
- vi) Write down the difference between Batesian and Mullerian mimicry?
- vii) What is queen substance? Write down its function.
- viii) Mention three names of local varieties of Earthworm used in vermicomposting.

Answer **any four** questions :

[4 × 10]

2. a) How can you distinguish fertilized and unfertilized chicken eggs?

b) Describe the deep litter system of chicken rearing. State the drawbacks of intensive system of fowl management.

c) Comment on the prospects of lac industries in India.

[(1+1)+(4+2)+2]

3. Write short notes on the following:

(2.5×4)

a) Nuptial Flight

b) Beeswax

c) Honey

d) Importance of bee keeping

4. a) Define Zugunruhe.

b) Write a short note on the types of bird migration.

c) What are the 4 major flyways in bird migration and the major flyways of India?

d) What do you mean by 'Kinesis' and 'Taxis'?

[1+3+(2+1)+3]

5. a) How eusocial insects have evolved?

b) Write a short note on the parental care of fish.

c) Write do you mean by alluring colouration and warning colouration?

d) What is parent offspring conflict?

(2+4+2+2)

6. a) How does honey bee communicate when food source more than 100 meter away from hive?  
 b) What are kiromone, allomone and synomones?  
 c) What do you mean by releaser pheromones and primer pheromones? Give examples.

[4+(1+1+1)+(1.5+1.5)]

7. a) Write down the composition of silk fibre of silk moth.  
 b) Write down the scientific names tasar and muga silk moth and scientific names of their host plants.  
 c) What is Pebrine disease?  
 d) How you will discriminate male and female mulberry larva and pupa?  
 e) What is Renditta and Danier?

[2+2+2+2+2]

8. a) Describe the entire procedure of preparation of vermicompost with its preventive measures.  
 b) Write atleast four demerits of culturing silver carp.  
 c) Discuss the comparison between Extensive, Intensive and Semi intensive aquaculture.  
 d) Distinguish between Male carp and female carp.  
 e) What is polyculture?

[3+2+2+2+1]

9. The survival time in months for 51 patients suffering from Acute Myeloblastic Leukomia (AML) was diagnosed to be

18	31	31	31	36
01	01	39	20	04
45	36	12	08	01
15	24	02	33	29
07	05	01	02	12
09	01	01	09	05
27	01	13	01	05
01	03	04	01	18
01	02	01	08	03
04	14	03	03	13
13				

- a) Calculate the sample mean and Standard Deviation.  
 b) Draw a histogram and to show the distributions of survival times.

(5+5)

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