

[Time: 3 Hours]

[Marks:100]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Figures to the right indicate full marks.
 3. Draw neat and labelled diagrams wherever necessary.

Q.1 A) Fill in blanks by choosing correct option.

(05)

- 1) _____ shows polygamous group.
 - a. Gorilla
 - b. Marmosets
 - c. Orangutans
- 2) Bed bug is an example of _____.
 - a. permanent parasite
 - b. endoparasite
 - c. ectoparasite
- 3) _____ is an extracellular parasite.
 - a. Liver fluke
 - b. Monocystis
 - c. Plasmodium
- 4) _____ cells are larger than other cells in bee hive.
 - a. Queen
 - b. Worker
 - c. Drone
- 5) _____ is an excellent breed of cow in India.
 - a. Sahiwal
 - b. Murrah
 - c. Lumbricus

Q.1 B) Match the columns I and II and rewrite.

(05)

Column I	Column II
1) Apidae	a) Vermiculture
2) Warning colouration	b) Endoparasite
3) Monarch and Viceroy butterfly	c) Rock honey bee
4) <i>Eisenia fetida</i>	d) Coral snake
5) Ascaris	e) Batesian mimicry

Q.1 C) State whether true or false.

(05)

- 1) Classical conditioning was demonstrated in dogs by Ivan Pavlov.
- 2) *Plasmodium vivax* is an obligatory parasite.
- 3) Cockroach is a type of mechanical vector.
- 4) Suspended foreign particles from milk can be removed during clarification.
- 5) Earthworms prefer salt content more than 10% in soil.

Q.1 D) Answer in only one sentence.

(05)

- 1) Name any one dance pattern used for communication in honey bees.
- 2) What is filial imprinting?
- 3) What is monogenetic parasite?
- 4) What is apiculture?
- 5) Define vermiculture.

Q.2 A) Describe sexual imprinting with suitable example. (10)

OR

A) Describe ritualization. Add a note on its significance. (10)

Q.2 B) Explain **any two** of the following. (10)

- Social behaviour in Hanuman Langur.
- Instrumental learning in animals.
- History of ethology.
- Mimicry in animals.

Q.3 A) Describe life cycle of *Entamoeba histolytica*. (10)

OR

A) Describe morphology of head louse. Add a note on pathogenicity caused due to it and comment on its control measures. (10)

Q.3 B) Explain **any two** of the following. (10)

- Pathogenicity and control measures of Taeniasis.
- Morphology of mites.
- Mode of transmission and control measures of Rabies.
- Describe pathogenicity caused due to *Fasciola hepatica* and add a note on its control measures.

Q.4 A) What is apiculture? Describe flora and bees suitable for apiculture. (10)

OR

A) Describe maintenance and harvesting in vermiculture. (10)

Q.4 B) Explain **any two** of the following. (10)

- Production and economic importance of honey.
- Toned milk and whole milk.
- Market for vermicompost and scope for entrepreneurship.
- Cooling as a method of milk processing.

Q.5 Write short notes on **any four** of the following. (20)

- Innate behaviour in animals.
- Migration in fishes.
- Pathogenicity caused by *Wuchereria bancrofti*.
- Life cycle of bed bug.
- Composition of milk.
- Movable frame hive.
