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University of Mumbai

S.Y.B.Sc Zoology P-III (Elective 2)

Semester-IV (CBCSGC)

Q.P. Code: 65439

Time: 03 Hours

Marks: 100

- N.B:**
1. All questions are compulsory.
 2. All questions carry equal marks.
 3. Draw neat labeled diagrams wherever necessary.

- Q.1**
- A) Fill in the blanks by choosing the correct options given below [05]**
- | | |
|-----------------------|----|
| a) Hariyana | 01 |
| b) Home tract | 01 |
| c) <i>Bombyx mori</i> | 01 |
| d) Castor | 01 |
| e) Mollusks | 01 |
- B) Match the columns I and II and rewrite [05]**
- | Column I | Column II | |
|-------------------------------------|---------------------------------------|----|
| a) Weaning | : iii. Separation of calf from mother | 01 |
| b) Muscardine | : i. Fungal disease in silkworm | 01 |
| c) Stifling | : v. Cocoon production process | 01 |
| d) The velvet disease | : ii. Aquarium fish disease | 01 |
| e) <i>Macrobrachium rosenbergii</i> | : iv. Giant freshwater prawn | 01 |
- C) State whether True or False [05]**
- | | |
|----------|----|
| a) True | 01 |
| b) False | 01 |
| c) False | 01 |
| d) False | 01 |
| e) True | 01 |
- D) Answer the following in one sentence [05]**
- | | |
|--|----|
| a) Malvi breed of cattle: Gwalior, Indore, Bhopal and nearby parts of Madhya Pradesh. | 01 |
| b) Castration of calf: Removal of testicles of male cattle in order to control the reproductive ability that animal. | 01 |
| c) Sericulture: It is the cultivation of silkworms to produce silk. | 01 |
| d) Bivoltine species of silkworm: A bivoltine species is a species that has two broods of offspring per year. | 01 |
| e) Monoculture of fish: This is the culture of single species of fish in a pond or tank. | 01 |
- Q.2**
- A) Breeds of buffalo w.r.t origin, distinguishing character and economic use: [10]**
- | | |
|---|----|
| 1) General introduction to topic | 01 |
| 2) Introduction to buffalo breeds – Nagpuri, Murrah, Jafrabadi | 03 |
| 3) Explanation of origin, distinguishing characters and economic use of each separately | 06 |
- OR**
- A) Housing type of dairy farm: [10]**
- | | |
|---|----|
| 1) Introduction to dairy farm and types | 01 |
| 2) Description w.r.t. building for dairy farm, location, transportation facility, sanitation etc. | 09 |
- B) Answer any two from the following: [10]**

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a)	Khillari breed of cattle	05
	1) Introduction- Indian breed	01
	2) Explanation of origin, distinguishing characters and economic use	04
b)	Red sindhi breed of cattle	05
	1) Introduction- Indian breed	01
	2) Explanation of origin, distinguishing characters and economic use	04
c)	Distinguishing characters of Holstein	05
	1) Introduction- Exotic breed	01
	2) Explanation of distinguishing characters	04
d)	Economic importance of Jersey	05
	1) Introduction- Exotic breed	01
	2) Explanation of milk capacity and economics associated with it	04
Q.3	A) Life history of silkworm:	[10]
	1) Introduction of <i>Bombyx mori</i> and its type of metamorphosis	02
	2) Diagrammatic representation of various stages of life cycle	02
	3) Explanation of each stage-eff, larva, pupa and adult	06
	OR	
A)	Processing of cocoon:	[10]
	1) Introduction to cocoon processing	01
	2) Steps in cocoon processing- Sorting of cocoon, stifling, deflossing, riddling, cooking, brushing, reeling, degumming, re-reeling, finishing and packing	09
B)	Answer any two from the following:	[10]
a)	Pebrine	05
	1) Introduction to disease- protozoan disease	01
	2) Common symptoms	02
	3) Control measures	02
b)	Host plants for sericulture	05
	1) Introduction	01
	2) List of varieties of silk moth (Mulberry, Tasar, Muga, Eri) and host plant in brief	04
c)	Methods of cocoon harvesting	05
	1) Introduction- harvesting	01
	2) Explanation of use of Chandrika to mount the silkworm and harvesting	04
d)	Tasar silkworm	05
	1) Introduction to variety, origin, distribution	03
	2) Type of silk produce	02

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- Q.4 A) Finfish culture and importance for aquaculture: [10]**
- 1) Introduction to method and species used 02
 - 2) Description of technique/culture method 06
 - 3) Importance for aquaculture 02
- OR**
- A) Polyculture [10]**
- 1) Definition and introduction to method 02
 - 2) Examples and description of technique/culture method 06
 - 3) Importance 02
- Q.4 B) Answer any two of the following: [20]**
- a) Scope of fishery resources in India 05**
- 1) Status of Indian fishery 02
 - 2) Natural sources, opportunities, technical advancement and future scope 03
- b) Composition of Pearl: 05**
- 1) Introduction to pearl 01
 - 2) Chemical composition with percentages-Calcium carbonate/aragonite (88-90%), Organic conchiolin (3.5- 5.9%), Water (2-4%), residue(0.1-0.8%). 04
- c) Cage culture-advantages and disadvantages 05**
- 1) Introduction to method 01
 - 2) Advantages and disadvantages 04
- d) White shrimp culture 05**
- 1) Introduction to method 01
 - 2) Description of technique/culture method and importance 04
- Q.5 Write short notes on any four: [20]**
- a) Dehorning 05**
- 1) Definition and methods 04
 - 2) Importance 01
- b) Cleaning and sanitation of cattle farm 05**
- 1) Importance of cleaning and sanitation 02
 - 2) Description w.r.t. use of pesticides and chemical agents to disinfect the farm 03
- c) Sexual dimorphism in adult silk moth 05**
- 1) Sexual dimorphism definition 01
 - 2. Prominent sexually dimorphic characters in adult silk male and female moth 04
- d) Muga silkworm 05**

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1) Introduction to variety, origin, distribution	03
2) Type and quantity of silk produce	02
e) Fish seed transport	05
1) Fish seed and its transportation importance	01
2) necessary requirements/ facilities for transportation	04
f) Pearl culture method in brief.	05
1) Introduction to method and species used	01
2) Description of technique: Collecting oysters, Seeding, and harvesting in brief	04
