

54349

**University of Mumbai**

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

**Q.P.Code: 00054349**

**Time: 03 Hours**

**Marks: 100**

- Q.1] A) Fill in the blanks by choosing the correct options given in brackets: 05**
- i) Anemone fish 01
  - ii) Aphids 01
  - iii) Agricultural pest 01
  - iv) Spider 01
  - v) Komodo dragon 01
- B) Match the columns I and II and rewrite (arranged answers) 05**
- | Column I             |        | Column II                 |    |
|----------------------|--------|---------------------------|----|
| a) Catfish           | : i)   | Endemic species           | 01 |
| b) Bandicoots        | : ii)  | Non-insect pest           | 01 |
| c) Use of light      | : iii) | Mechanical pest control   | 01 |
| d) Deep sea diving   | : iv)  | Sperm whale               | 01 |
| e) Psychedelic Gecko | : v)   | Crime fighting in species | 01 |
- C) State whether True or False 05**
- i) True 01
  - ii) False 01
  - iii) True 01
  - iv) True 01
  - v) True 01
- D) Define the following/answer in one sentence 05**
- i) **Endemic species:** A species found naturally in only one geographic area is termed as endemic species. 01
  - ii) **Biological control:** It is the type of pest control wherein one living organism is used to control other live organism. 01
  - iii) **Parasitoid:** The insect/living organism which parasitize primary parasite of the host plant. 01
  - iv) Indian Giant squirrel 01
  - v) Joker crab 01
- Q.2] A) Answer any one from the following questions: 10**
- i) **Formulated fish feed 10**
    - 1. Introduction 02
    - 2. Examples 02
    - 3. Description of examples 06
  - ii) **Biology of guppy 10**
    - 1. Introduction 02
    - 2. Habitat and distribution 02

54349

3. Food and feeding	02
4. Reproduction	04
<b>B) Explain <u>any two</u> from the following questions:</b>	
<b>i) Goldfish as an aquarium fish</b>	<b>05</b>
1. Introduction	01
2. Description	04
<b>ii) Common characters and sexual dimorphism of butterfly fish</b>	<b>05</b>
1. Introduction	01
2. Description of characters and sexual dimorphism	04
<b>iii) Fish packing during fish transportation</b>	<b>05</b>
1. Introduction	01
2. Description	04
<b>iv) Introduction and scope of maintenance of aquarium</b>	<b>05</b>
1. Introduction	01
2. Description	04
<b>Q.3] A) Answer <u>any one</u> of the following questions:</b>	
<b>i) Stored grain pest with suitable example</b>	<b>10</b>
1. Introduction to stored grain pest	02
2. Examples with description (Flour beetle as pest)	06
3. Explanation on type of damage and suggested control measure/s	02
<b>ii) Life cycle, nature of damage and control measures of Brinjal fruit borer</b>	<b>10</b>
1. Introduction life cycle stages with description	05
2. Diagram/illustrations	02
3. Nature of damage and control measures	03
<b>B) Explain <u>any two</u> from the following questions:</b>	
<b>i) Cultural control of pest</b>	<b>05</b>
1. Introduction	01
2. Various cultural methods in control of pest	04
<b>ii) Birds as pests</b>	<b>05</b>
1. Introduction of birds as non-insect pest	02
2. Type of damage and possible control measures	03
<b>iii) Cynogas pump as an plant protection appliance</b>	<b>05</b>
1. Construction and working	02
2. Diagram	02
3. Application	01

54349

iv)	<b>Life cycle of Pink bollworm</b>	
	1. Introduction life cycle stages with description	05
	2. Diagram/illustrations	03
		02
Q.4]	A) <b>Answer <u>any one</u> of the following questions:</b>	
	i) <b>Blue Mormon and striped Tiger as flying jewels</b>	10
	1. Introduction	02
	2. Characters as flying jewels for both	08
	ii) <b>Amazing animals King fisher and Spatule tailed humming bird</b>	10
	1. Life history	05
	2. Characteristic features	05
	B) <b>Explain <u>any two</u> from the following questions:</b>	10
	i) <b>Amazing characters of Lesser flamingo</b>	05
	1. Description	05
	2. Characters	05
	ii) <b>Homing in Pacific salmon</b>	05
	1. Description and homing	05
	iii) <b>Amazing aspects of strawberry poison frog</b>	05
	1. Description	02
	2. Characters	03
	iv) <b>Stabbing Shark as incredible animal</b>	05
	1. Description	02
	2. Incredible characters	03
Q.5]	<b>Write short notes on <u>any four</u> of the following questions:</b>	
	i) <b>Live fish feed</b>	20
	1. Introduction	05
	2. Examples	01
	3. Description	01
		03
	ii) <b>Budget for setting up of an ornamental fish farm</b>	05
	1. Introduction	01
	2. Description	04
	iii) <b>Crabs as non-insect pests</b>	05
	1. Introduction in context with crab as non-insect pest	01
	2. Type of damage and possible control measures	04
	iv) <b>Grasshopper as forestry pest</b>	05
	1. Introduction to forestry pests	01
	2. Type of damage and possible control measures	04

4

54349

v) <b>Spider as dedicated mother</b>	05
1. Reproductive behavior of female	02
2. Characters	03
vi) <b>Marvelous characters of Mantis shrimp</b>	05
1. Description	02
2. Characters	03

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