

Solution

Q.1. A. Fill in the blanks 05

- a) Tiger prawns; b) Raymond Pearl; c) intraspecific
d) Biokinetic zone; e) Endangered.

B. Match the column. 05

- | | |
|------------------------|-----------------------------|
| a) Concave shape curve | Mortality is very high |
| b) Phytoplankton | Inverted pyramid of biomass |
| c) Commensalism | Remora shark |
| d) Asiatic lion | <i>Panthera Leo persia</i> |
| e) Leopard | <i>Panthera pardis</i> |

C. True of False 05

- a) True; b) False; c) True; d) True; e) False.

D) Answer in one sentence. 05

- a) A life table shows the age specific mortality in the population under consideration.
- b) Convex curve, Diagonal curve, Concave curve or stair shaped curve.
Any two from above
- c) International union for conservation of Nature.

d) Biopiracy is the illegal appropriation of life and the traditional cultural knowledge that accompanies it. Or It is a situation where indigenous knowledge of nature, originating with indigenous people, is used by others for profit, without permission from the indigenous people.

e) Project Rhinoceros It is a programme which aims at improving the endangered status of Rhinoceros.

Q.2	A. Defination of Mortality	02
	Explanation of types with example	08
	or	
	A. Introduction	04
	Description of the patterns	06
	B. Short notes.	
	a) Description	05
	b) Explanation	05
	c) Explanation of Age structure	02
	Explanation of Age pyramid	03
	d) Introduction	02
	Explanation of J shaped Growth curve	03
Q.3	A. Definition of food chain.	02
	Explanation of types with example	08
	OR	
	A. Introduction	02
	Description any freshwater habitat	08
Q.3 B	a) Explanation .	05

b) Explanation	05
c) Definition of positive interaction	01
Explanation of types	04
d) Explanation	05
Q.4 a) Introduction of ecotourism	05
Description of Kaas plateau	05
b) Introduction of the concept	03
Description of the patents	07
c) Description	05
Mention of two animals	05
d) Introduction of the concept	06
Any one example of biopiracy	04
Q.5 a) Explanation of sex ratio	05
b) Definition	01
Explanation	04
c) Explanation of Abiotic factors	05
d) Description	05
e) Explanation	05
f) Explanation of pyramid	05

Zoology Paper II

Q.P. Code :00039

Solution

Q.1. A. Fill in the blanks 05

- a) Benzene; b) is above ; c) transfecting
- d) 1×10^6 g ; e) Beer.

s

B. Match the column. 05

- | | |
|-----------------------|------------------------|
| a) 400nm | Violet colour absorbed |
| b) Ocular | 10X |
| c) rDNA | Insulin |
| d) 800nm | Red colour absorbed |
| e) oil immersion lens | 100X |

C. True of False 05

- a) True; b) False; c) True; d) False; e) True.

D) Answer in one sentence. 05

- a) Data is a set of values recorded on one or more observation units.
- b) Buffers are agents capable of limiting the hydrogen ion concentration within a certain range.

- c) Mode is a value of a variable which occurs most frequently.
- d) Wave number is $1/\lambda$.
- e) Herman is a transgenic bull that carries a transgene for lactoferrin.

Q.2	A. Definition of multiple bar diagram	02
	Explanation with diagram	08
	or	
	B. Definition	01
	Description of three scales.	09
	B. Short notes.	
	a) Mention of five characteristics of solution	05
	b) Explanation	05
	c) Definition of sampling	01
	Explanation of snowball sampling	04
	d) Definition of arithmetic mean	01
	Mention of merits and demerits	04
Q.3	A. Definition of ex vivo gene therapy.	02
	Explanation of its application	08
	OR	
	A. Definition of DNA finger printing	02
	Explanation with suitable example.	08
Q.3 B	a) Explanation of green gene concept.	05

b) Explanation of cloning (Dolly).	05
c) Definition of embryonic stem cells	01
Explanation of transgenesis using ES	04
d) Explanation	05
Q.4 a)Explanation of principle of centrifuge	06
Mention of application	04
b) Description of pH meter	06
Mention of application	04
c)Explanation of principle of chromatography	05
Explanation	05
d) Explanation of dissecting microscope	05
Explanation of compound microscope	05
Q.5 a) Explanation of cystic fibrosis	05
b)Defination	01
Methodology	04
c) Explanation of PAGE	05
d) Explanation	05
e) Explanation	05
f)Explanation of principle of colorimetry	05

D.S.P.M'S K. V. PENDHARKAR COLLEGE, DOMBIVLI.

CLASS: S.Y.B.SC.

PAPER: ZOOLOGY-I

MARKS: 75

DURATION: 2HRS.30MINS.

NOTE: All questions are compulsory.

Figures to the right indicates full marks,

Draw neat and labelled diagram wherever necessary.

Q.1. Answer **any four** out of eight. **20**

1. Describe Chemical evolution with Miller Urey's experiment.
2. Write a note on Homologous organs.
3. Write a note on Lamarckism.
4. Discuss evidences in favour of organic evolution by giving examples of physiology.
5. Describe vestigial organs with respect to organic evolution.
6. Discuss weisman's germplasm theory.
7. Write explanatory note on mutation theory.
8. Describe chemical evolution with Haldane and Oparin theory.

Q.2. a. Answer **any one** of the two. **10**

1. Explain the sources of genetic variation in natural population.
2. Discuss the Post Zygotic barriers responsible for reproductive isolation.

b. Answer **any two** out of the four. **10**

1. Write note on Macroevolution.
2. Explain Adaptive radiation.
3. Write note on Sympatric speciation.
4. Explain Hardy Weinberg equilibrium.

Q.3. Answer **any two** out of four. 20

1. Explain the steps involved in Scientific method.
2. Give an account of approval from concerned authorities for conducting research.
3. Elaborate on ethics in animal research.
4. Explain the role of computer in research.

Q.4. A. Write short note on Analogous organs. 5

OR

Q.4. A. State whether **TRUE or FALSE** 5

1. Precipitation test was designed by Nottal.
2. Archaeopteryx is an example of connecting links.
3. Weisman proposed the mutation theory.
4. George Cuvier is known as founder of modern physiology.
5. Coacervates are unicellular assemblies present in a cold aqueous medium as isolated distinct forms.

Q.4. B. Write short note on Co evolution 5

OR

Q.4.B. Define the terms. 5

1. Prezygotic isolating mechanism.
2. Gene pool
3. Allele
4. Mutation
5. Population

Q.4. C. Enumerate characteristics of Scientific research. 5

OR

Q.4. C. Define the terms. 5

1. Ethics
2. Deduction

3. Scientific method

4. Plagiarism

5. Induction
