Zoology	Paper II	Q	.P. Code :00039
	S	Solution	
Q.1. A. Fill in th	e blanks		05
a) Benzene;	b)is above ; c)) transfecting	
d) 1 x 10^6 g ; e	e) Beer.		
B. Match t	he column.		05
a) 400nm		Violet colour abs	orbed
b) Ocular		10X	
c) rDNA		Insulin	
d) 800nm		Red colour absor	bed
e) oil imme	rsion lens	100X	
C. True of	False		05
a) True; b)	False; c) True	; d) False; e)True.	
D) Answer	in one sentenc	e.	05
a) Data is	a set of values	recorded on one or m	ore observation units.
b) Buffers concentrati	are agents cap ion within a c	pable of limiting the hy ertain range.	drogen ion
c) Mode is	a valve of a v	ariable which occurs i	nost frequently.
d) Wave nu	umber is $1/\lambda$.		
e)Herman	is a transgeni	c bull that carries a trai	nsgene for lactoferrin.

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Q.2	A. Definition of multiple bar diagram	02
	Explanation with diagram	08
	or	
	A. Defination	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) Defination 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
03	B a) Explanation of green gene concept	05
X .5	b) Explanation of cloning (Dolly)	05
	c) Definition of embryonic stem cells	01
	Explanation of transgenesis using ES	04
	Explanation of transgenesis using ES	04

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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

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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.

OR

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. Co acervates 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
OAC Define the terms	5
1. Ethios	5
2. Deduction	
3. Scientific method	
4. Plagiarism	
5. Induction	

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