



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – ZOOLOGY

FIRST SEMESTER – NOVEMBER 2022

PZO1MC01 – SYSTEMATICS AND DIVERSITY OF ANIMALS

Date: 23-11-2022

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A

Answer ALL the Questions

1. Define		(5 x 1 = 5)	
a) Serotaxonomy	K1	CO1	
b) Expand: NJM	K1	CO1	
c) Organs of tomosvary	K1	CO1	
d) Ecdysis	K1	CO1	
e) Peripatric speciation	K1	CO1	
2. Fill in the blanks		(5 x 1 = 5)	
a) A group that does not share common ancestor and have multiple origins is _____	K2	CO1	
b) In _____ development the cleavage of cells in the early zygote is spiral.	K2	CO1	
c) _____ is a short gene sequence present in the genome which is unique to identify species.	K2	CO1	
d) Three kingdom classification was proposed by _____	K2	CO1	
e) The tree that shows only the degree of relatedness between taxa and does not show the evolutionary path is called _____	K2	CO1	

SECTION B

Answer any THREE of the following in 500 words

(3 x 10 = 30)

3. Illustrate the three-domain classification and add a note on the rules involved in nomenclature.	K3	CO2	
4. Explain the different concepts of species with suitable examples.	K3	CO2	
5. Explain the organizational features and phylogeny of sponges.	K3	CO2	
6. Prepare a note on the structural and functional adaptations of fishes.	K3	CO2	
7. Demonstrate the features and adaptive modification of mesozoic world of reptiles.	K3	CO2	

SECTION C

Answer any TWO of the following in 500 words

(2 x 12.5 = 25)

8. Classify the animal kingdom with examples.	K4	CO3	
9. Distinguish taxonomy from systematics and add a note on how taxonomy is useful	K4	CO3	

	in conserving biodiversity.		
10.	Explain the characteristics and phylogenetic position of vertebrates.	K4	CO3
11.	Classify and explain the major classes of mammals with suitable examples.	K4	CO3
SECTION D			
Answer any ONE of the following in 1000 words		(1 x 15 = 15)	
12.	Evaluate the classes of arthropods and elaborate the adaptive radiation of those classes.	K5	CO4
13.	a) Illustrate a cladogram comprising the classes of tetrapods. (5 Marks)	K5	CO4
	b) Summarize recent trends in modern taxonomy. (10 Marks)		
SECTION E			
Answer any ONE of the following in 1000 words		(1 x 20 = 20)	
14.	Compile the structural and functional modifications in birds for aerial life.	K6	CO5
15.	Compose an essay on molecular phylogenetics and its tree construction methods.	K6	CO5

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