LIFE AND DIVERSITY OF INVERTEBRATES

Semester	Subject Code	Category	Lecture		Theory		Practical	Credits
			Hrs/ week	Total Hours/ Semester	Hrs/ week	Total Hours/ Semester		
I	21CPZO1A	Core - I	5	75	5	75	Nil	5

COURSE OBJECTIVES

- To comprehend the systematic position, biodiversity, functional morphology, mode of life, affinities and phylogeny of invertebrates.

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To understand the systematic position and classification of invertebrate animals based on their hierarchy.	K2
CO2	To understand the evolution and polymorphism of coelenterates and parasitic adaptations of helminthes.	K2
CO3	To imbibe knowledge on the economic importance of invertebrates	K3
CO4	To update the knowledge of mollusca and their evolutionary significance.	K4
CO5	To acquire knowledge on phylogeny of invertebrates and fossils.	K4

Knowledge Level : K1-Remember ; K2 –Understand ; K3 – Apply ; K4 – Analyze

MAPPING WITH PROGRAMME OUTCOMES

COS	PO1	PO2	PO3	PO4	PO5
CO1	S	M	M	M	S
CO2	M	S	S	S	M
CO3	S	S	S	M	S
CO4	S	S	M	S	M
CO5	S	S	S	S	S

S- Strong; M – Medium ; L- Low

DISTRIBUTION OF MARKS: THEORY 100%

UNIT-I **15 Hours**

Broad classification of the Animal Kingdom, Affinities and Phylogeny of Invertebrates - Concepts of species, hierarchial taxonomy.

Protozoa

Feeding, Reproduction and Parasitic adaptations with suitable examples.

Economic importance of Protozoa.

Theories on Origin and evolution of Metazoa.

Porifera

Functional morphology of Freshwater and Marine sponges with suitable examples.

Reproduction in sponges.

Systematic position and Affinities.

UNIT-II **15 Hours**

Coelenterata

Origin and evolution, Polymorphism and Reproduction.

Corals and Coral reefs.

Helminthes

Functional morphology and adaptations for parasitic mode of life. Human Helminth diseases.

UNIT-III **15 Hours**

Annelida

Archiannelida. Interrelationship between different classes of Annelida. Origin and evolution of coelom. Adaptive radiation and Metamerism in Annelida.

Arthropoda

Xiphosura-structure and affinities. Larval forms in crustaceans. Economic importance of Crustaceans. Phylogeny of Arthropoda.

UNIT-IV **15 Hours**

Mollusca

Torsion in Gastropods - Adaptive radiation in Mollusca. Phylogeny of Mollusca.

Echinodermata

Origin and evolutionary significance of Echinoderm larvae.

UNIT-V **15 Hours**

Minor Phyla

Structural peculiarities and affinities of Nemertinea and Rotifera.

Invertebrate fossils: Trilobites and Brachiopod

TEXT BOOKS

S.NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	Hyman L.H.	The Invertebrata, Vol I to VI.	Mc Graw – Hill Book Co., New York.	1951

2.	Carter, G.S.A.	General Zoology of Invertebrates	Sidewick& Jackson Ltd., London.	1969.
3.	Barrington, E.J. W.	Invertebrate Structure and Functions	English Language Book Society.	1969.
4.	Marshall A.J and Williams W.D	Textbook of Zoology, Vol. I: Invertebrates	7th Edition – ELBS	1976.

REFERENCE BOOKS

S.NO	AUTHORS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	Barnes. R.D	Invertebrate Zoology	W.B. Saunders Co.,Philadelphia	1974
2.	Borradile, L.A. Eastham, L.E.S. and J.T. Saunders	The Invertebrate	Cambridge University Press	1977
3.	Moore, R.C. Lalicker, C.G. and Fisher,A.G.	Invertebrate Fossils.	Mc Graw Hill Book Co., New York	1952
4.	Gardinar, M.S.	Biology of the Invertebrates,	McGraw - Hill Book Co., New York.	1972
5.	Richard C Brusca	Invertebrate Zoology	Hardcever Publiser	2003

WEB SOURCES:
www.sciencedirect.com
www.pubmed.com
www.livescience.com

TEACHING METHODOLOGY

- Class room teaching
- Assignments
- Discussions
- Home test
- PPT Presentations
- Demonstration from the Video slides, videos and interactive software.

SYLLABUS DESIGNERS

- Dr D.Sasikala, Assistant Professor & HOD
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