St. Aloysius College (Autonomous), Jabalpur
Department of Higher Education, Govt. of M.P.
Under Graduate Syllabus for B.Sc. (Bio)
As recommended by Central Board of Studies in Zoology
Class - B.Sc. I Semester
(Session 2023-24)

Theory Syllabus			
Part A Introduction			
Programme - Certificate Course	**Class: B.Sc.**	**Year: I Semester**	**Session: 2023-24**
Subject: Zoology			
1.	Course Code	S1-ZOOL1T	
2.	Course Title	Animal Diversity: Non-Chordata	
3.	Course Type	Generic Elective	
4.	Pre-requisite (if any)	To study this course a student must have had the subject Biology in 12th Class	
5.	Course Learning outcomes (CLO)	Upon completion of the course students should be able to 1. Learn about the importance of systemic, taxonomy and phylogeny to get a concrete idea of evolution of non-chordate phyla. 2. Understand the various morphological, anatomical structures and functions of animals of different phyla. 3. Get the knowledge about economic, ecological and medical significance of various animals in human welfare. 4. Understand the important parasites and their control measures.	
6.	Credit Value	3	
7.	Total Marks	Max. Marks: 60+40	Min. Passing Marks:35

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Part B Content of the course		
Total No. of Lectures – Tutorials- Practical (in hours per week): 2hours per week		
L-T-P:		
Unit I	**Topics**	**No. of Lectures**
I	**Taxonomy, Phylogeny and Protozoa** **1. Taxonomy** 1.1 Elementary Knowledge of Zoological Nomenclature and International Code 1.2 Outline Classification of Animal Kingdom up to Phylum of acoelomate and coelomate non-chordates according to Parker and Haswell 7th edition **2.Phylogeny** 2.1 Definition and Examples **3. Protozoa** 3.1 Phylum Protozoa: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples 3.2 Structure, life history and pathogenicity of malarial Parasite (Plasmodium vivax) 3.3 Protozoa and disease - **Amoebiasis, Trypanosomiasis, Leishmaniasis& Trichomoniasis** **Keywords/Tags:** ICZN, Classification, Protozoa, Plasmodium,	11
II	**Porifera, Coelenterata** **1. Porifera** 1.1 Phylum Porifera: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples 1.2 Type study of Sycon Morphology, Reproduction & Development 1.3 Canal system of Sponges **2. Coelenterata** 2.1 Phylum Coelenterata: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples. 2.2 Type Study of Obelia -Morphology, Life cycle 2.3 Corals and Coral reef formation **Keywords/Tags:** Classification, Porifera, Sycon, Coelenterata, Obelia, Coral reefs	11
III	**Platyhelminthes, Nemathelminthes, Annelida** **1. Platyhelminthes** 1.1 Phylum Platyhelminthes: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples 1.2 External morphology, larval forms and life history *Fasciola hepatica* (Liver fluke) **2. Nemathelminthes** 2.1 Phylum Nemathelminthes: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples	10

	2.2 Pathogenic symptoms of Nematodes and diseases – Ascariasis, Trichuriasis, Enterobiasis, Filariasis & Trichinosis (Trichinellosis) **3. Annelida** 3.1 Phylum Annelida: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples 3.2 Type study of Earthworm (*Pheretima*) 3.3 Structure and significance of Trochophore larva **Keywords/Tags**: Classification, Platyhelminthes, Liver fluke, Nematode disease, Annelida, *Pheretima*, Trochophore	
IV	**Arthropoda, Mollusca, Echinodermata, Hemichordata** **1. Arthropoda** 1.1 Phylum Arthropoda: General Characters of the phylum and outline classification up to classes with distinctive characters and suitable examples 1.2 Type study of Prawn 1.3 Insects as a vector of human disease - Culex, Aedes, Tsetse fly & Housefly. **2. Mollusca** 2.1 Phylum Mollusca: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples 2.2 Type study of *Pila* **3. Echinodermata** 3.1 Phylum Echinodermata: General characters of the phylum and outline classification up to classes with distinctive characters and suitable examples **4. Hemichordata** 4.1 Phylum Hemichordata: General characters of the phylum hemichordate and relationship with non-chordates and chordates **Keywords/Tags**: Classification, Arthopoda, Prawn, Crustacea larva, Insects, Mollusca, *Pila*, Glochidium, Classification of Echinodermata, and Hemichordata,	13

Practical Syllabus			
Part A Introduction			
Programme: Certificate Course	Class: B.Sc	Year: I Semester	Session: 2023-24
Subject: Zoology			
1.	Course Code	S1-ZOOL1P	
2.	Course Title	Invertebrate	
3.	Course Type	Generic Elective	
4.	Pre-requisite (if any)	To study this course a student must have had the subject Biology in 12th Class	
5.	Course Learning outcomes (CLO)	Upon completion of the course students should be able to 1. Identify invertebrate animals of different phyla and their histology through study of museum specimens and slides. 2. Learn their different systems through dissections. 3. Enhance collaborative learning and communication skills through practical sessions, team work, group discussions, assignments and projects.	
6.	Credit Value	1	
7.	Total Marks	Max. Marks: 60+40	Min. Passing Marks:35

Part B- Content of the Course		
Total No. of Lectures - Tutorials-Practical (in hours per week): 02 hours per week **L-T-P:**		
Unit	**Topics**	**No. of lectures**
1.	Study of museum specimens and slides relevant to the invertebrates.	15
2.	Dissection (Demonstration Only -Through You Tube Video or Models or Charts) a.Earthworm- Digestive system. Nervous system, Reproductive system b. Prawn-Nervous system and appendages	
3.	Mouth Parts of Insects – Cockroach/Mosquitoes	
4.	Examination of pond water for study of different kinds of microscopic non-chordate organisms	
5.	Economic Importance of any two invertebrates/ two insects	
6.	Parasitic adaptation of any one parasite – *Fasciola hepatica* / *Taenia solium*	
Keywords/Tags: Museum specimens, Slides, Dissection, Benefited insects, parasitic adaptation.		