

# Vidyasagar University

## *Curriculum for B.Sc (General) in Zoology* [Choice Based Credit System]

### Semester-I

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
CC1 [DSC-1A]		C1T:Animal Diversity	Core Course-1	4	0	0	6	75
		C1P:Animal Diversity		0	0	4		
CC2 [DSC-2A]	TBD	<b>DSC-2A</b> (other Discipline)	Core Course-2				6	75
CC3 [DSC-3A]	TBD	<b>DSC-3A</b> (other Discipline)	Core Course-3				6	75
AECC		English	AECC (Elective)	1	1	0	2	50
<b>Semester Total</b>							<b>20</b>	<b>275</b>

**L**=Lecture, **T**=Tutorial, **P**=Practical, **CC** = Core Course, **TBD** = To be decided, **AECC**= Ability Enhancement Compulsory Course

**DSC-1** = Discipline Specific Core of Subject-1, **DSC-2** = Discipline Specific Core of Subject-2, **DSC-3** = Discipline Specific Core of Subject-3.

**Semester-I**  
**Core Course (CC)**

**CC-1 : Animal Diversity**

**Credits 06**

**C1T: Animal Diversity**

**Credits 04**

**Unit 1: Kingdom Protista**

General characters and classification up to classes; Locomotory Organelles and locomotion in Protozoa

**Unit 2: Phylum Porifera**

General characters and classification up to classes; Canal System in *Sycon*

**Unit 3: Phylum Cnidaria**

General characters and classification up to classes; Polymorphism in Hydrozoa

**Unit 4: Phylum Platyhelminthes**

General characters and classification up to classes; Life history of *Taenia solium*

**Unit 5: Phylum Nemathelminthes**

General characters and classification up to classes; Life history of *Ascaris lumbricoides* and its parasitic adaptations

**Unit 6: Phylum Annelida**

General characters and classification up to classes; Metamerism in Annelida

**Unit 7: Phylum Arthropoda**

General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects

**Unit 8: Phylum Mollusca**

General characters and classification up to classes; Torsion in gastropods

**Unit 9: Phylum Echinodermata**

General characters and classification up to classes; Water-vascular system in Asteroidea

**Unit 10: Protochordates**

General features and Phylogeny of Protochordata

**Unit 11: Agnatha**

General features of Agnatha and classification of cyclostomes up to classes

**Unit 12: Pisces**

General features and Classification up to orders; Osmoregulation in Fishes

**Unit 13: Amphibia**

General features and Classification up to orders; Parental care

### **Unit 14: Reptiles**

General features and Classification up to orders; Poisonous and non-poisonous snakes, Biting mechanism in snakes

### **Unit 15: Aves**

General features and Classification up to orders; Flight adaptations in birds

### **Unit 17: Mammals**

Classification up to orders; Origin of mammals

**Note:** Classification of Unit 1-9 to be followed from “Barnes, R.D. (1982). *Invertebrate Zoology*, V Edition”

### **C1P: Animal Diversity (Practical)**

**Credits 02**

#### **1. Study of the following specimens:**

*Amoeba, Euglena, Plasmodium, Paramecium, Sycon, Hyalonema, and Euplectella, Obelia, Physalia, Aurelia, Tubipora, Metridium, Taenia solium, Male and female Ascaris lumbricoides, Aphrodite, Nereis, Pheretima, Hirudinaria, Palaemon, Cancer, Limulus, Palamnaeus, Scolopendra, Julus, Periplaneta, Apis, Chiton, Dentalium, Pila, Unio, Loligo, Sepia, Octopus, Pentaceros, Ophiura, Echinus, Cucumaria and Antedon, Balanoglossus, Herdmania, Branchiostoma, Petromyzon, Sphyrna, Pristis, Torpedo, Labeo, Exocoetus, Anguilla, Ichthyophis/Ureotyphlus, Salamandra, Bufo, Hyla, Chelone, Hemidactylus, Chamaeleon, Draco, Vipera, Naja, Crocodylus, Gavialis, Any six common birds from different orders, Sorex, Bat, Funambulus, Loris*

#### **2. Study of the following permanent slides:**

T.S. and L.S. of *Sycon*, Study of life history stages of *Taenia*, T.S. of male and female *Ascaris*

#### **3. Key for identification of poisonous and non-poisonous snakes**

An “animal album” containing photographs, cut outs, with appropriate write up about the above mentioned taxa. Different taxa/ topics may be given to different sets of students for this purpose.

### **Suggested Readings:**

1. Ruppert and Barnes, R.D. (2006). *Invertebrate Zoology*, VIII Edition. Holt Saunders International Edition.
2. Barnes, R.S.K., Calow, P., Olive, P.J.W., Golding, D.W. and Spicer, J.I. (2002). *The Invertebrates: A New Synthesis*, III Edition, Blackwell Science
3. Young, J. Z. (2004). *The Life of Vertebrates*. III Edition. Oxford university press.
4. Pough H. *Vertebrate life*, VIII Edition, Pearson International.
5. Hall B.K. and Hallgrímsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.