I. Identify the given animal 'A' (picture/specimen) and write any 2 diagnostic features with diagram.

 $( \mathbf{0} )$ 

1. SPONGILLA

### **Identification:**

The given specimen is identified as *Spongilla*. It belongs to the Phylum **Porifera**.



#### **Reasons for identification:**

- It is a pore bearing animal.
- It is an aquatic multicellular animals with cellular level of organization.
- It possess a canal system where the water enters into the central cavity, spongocoel through minute pores called ostia.
- The spongocoel is lined with special flagellated cells called choanocytes.

### 2. SEA ANEMONE

### Identification:

The given specimen is identified as **Sea anemone.** It belongs to the Phylum **Cnidaria.** 



### **Reasons for identification:**

- Sea anemone is diploblastic and the first group of animals to exhibit tissue level of organization.
- It has stinging cells called nematocysts on their tentacles.
- The central vascular cavity is called coelenteron which opens out through the hypostome.
- The nervous system is formed of a diffused nerve net.
- Cnidarians exhibit 2 basic body forms, polyp and medusa.
- The polyp represents the asexual generation and the medusa represents the sexual generation (Alternation of generation).
- Development includes a ciliated Planula larva.

# 1

( )

## **3. PLEUROBRACHIA**

### **Identification:**

The given specimen is identified as **Pleurobrachia.** It belongs to the Phylum **Ctenophora.** 



## **Reasons for identification:**

• Pleurobrachia are exclusively marine, biradially symmetrical, diploblastic animals with tissue level of organisation.

۲

- They have eight external rows of ciliated comb plates (comb jellies) which help in locomotion.
- Bioluminescence is well marked in ctenophores.
- They lack nematocysts but possess special cells called colloblasts which help in food capture.
- They reproduce only by sexual means. Fertilization is external and development is indirect and includes a larval stage called cydippid larva.

## 4. TAPEWORM

### **Identification:**

The given specimen is identified as **Tapeworm**. It belongs to the Phylum **Platyhelminthes**.



### **Reasons for identification:**

- It is a dorsoventrally flattened, triploblastic, acoelomate animal with organ level of organization.
- It is an endoparasite.
- Hooks and Suckers act as organs of attachment.
- Excretion is carried out by specialized cells called flame cells.

۲

# 5. ASCARIS

## **Identification:**

The given specimen is identified as *Ascaris*. It belongs to the Phylum **Aschelminthes**.



## **Reasons for identification:**

- Ascaris is a roundworm because it is circular in cross section.
- It is a triploblastic, pseudocoelomate animal.
- The unsegmented body is covered by a protective layer called cuticle.
- Alimentary canal is complete with a well developed mouth, pharynx and anus / cloaca.

۲

- Sexes are separate and exhibit sexual dimorphism.
- Excretion is carried out through Rennet glands.
- It is an endoparasite.

## 6. EARTHWORM

### **Identification:**

The given specimen is identified as **Earthworm**. It belongs to the Phylum **Annelida**.



### **Reasons for identification:**

- Earthworm is a triploblastic, schizocoelomate animal.
- Its elongated body is segmented.
- The longitudinal and circular muscles in the body wall help in locomotion.
- The circulatory system is of closed type and the respiratory pigment haemoglobin is present in the plasma.
- It is a hermaphrodite animal.

۲

TN\_GOVT\_XI\_Bio Zoology\_Practicle.indd 3

## 7. COCKROACH

### **Identification:**

The given specimen is identified as **Cockroach.** It belongs to the Phylum **Arthropoda.** 



## **Reasons for identification:**

- It is a triploblastic, schizocoelomate animal.
- It has jointed appendages which are used for locomotion.
- Body is covered by a chitinous exoskeleton which is shed off periodically by a process called moulting/ecdysis.

۲

- Respiration is through trachea.
- Excretion is by malpighian tubules.

## 8. PILA

### **Identification:**

The given specimen is identified as *Pila*. It belongs to the Phylum **Mollusca**.



### **Reasons for identification:**

- It is a triploblastic, coelomate animal.
- Body is covered by a calcareous shell.
- Internal organs are covered by a soft layer of skin called mantle.
- Respiration is carried out through a number of feather like gills called ctenidia.
- The mouth contains a rasping organ called radula.
- Excretory organs are the nephridia.
- Blood contains a copper containing respiratory pigment, haemocyanin.
- Their development includes a Veliger larva.

# 4

TN\_GOVT\_XI\_Bio Zoology\_Practicle.indd 4

۲

## 9. STARFISH

### **Identification:**

The given specimen is identified as **Starfish**. It belongs to the Phylum **Echinodermata**.



### **Reasons for identification:**

- It has spiny skin.
- It has Water vascular system.
- Tube feet help in locomotion.
- The adults are radially symmetrical.
- Larvae are bilaterally symmetrical
- Circulatory system is open type without heart and blood vessels.

۲

- It exhibits autotomy with remarkable power of regeneration.
- Bipinnaria is the first larva in its development.

## **10. BALANOGLOSSUS**

### **Identification:**

The given specimen is identified as *Balanoglossus*. It belongs to the Phylum **Hemichordata**.



## **Reasons for identification:**

- It is a connecting link between invertebrates and chordates.
- The body is divided into anterior proboscis, a short collar and a long trunk.
- It is a marine and bilaterally symmetrical animal.
- Excretion is by a single proboscis gland.
- Development is indirect with a free swimming Tornaria larva.
- Presence of buccal diverticulum is the significant character of this animal.

۲

 $( \bullet )$ 

# 11. RAT

## **Identification:**

The specimen kept for identification is the **Rat**. It belongs to the Phylum Chordata, Subphylum Vertebrata and Class **Mammalia**.



# **Reasons for identification:**

• Presence of mammary gland is the unique feature of mammals.

- Pair of pinnae or external ears are present.
- Heart is 4 chambered.
- Kidneys are metanephric and are ureotelic animal
- Rats are homeothermic and viviparous.