



Examination August/September 2018
Level I, Semester I
LIM 1122 – Freshwater Fauna

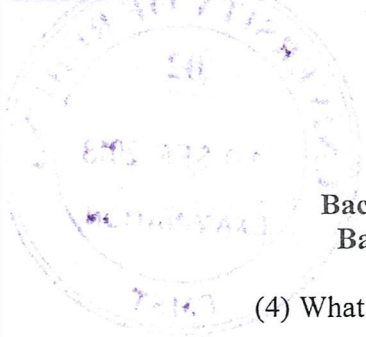
Time: 1 ½ hrs

Part A

Answer **all** questions of Part A. Underline the most suitable answer for each of the following multiple-choice questions.

(Time: 30 minutes)

- (1) Mammalian hair is
- (i) sunk into the epidermis.
 - (ii) shed by arrector pili.
 - (iii) colorful if it is a guard hair.
 - (iv) providing insulation if it is a guard hair.
 - (v) forming shorter vibrissae in burrowing animals.
- (2) Select the correct statement regarding animal classification.
- (i) Carolus Linnaeus was the first to classify organisms based on their structural similarities
 - (ii) Human cultures classify animals according to their destructiveness.
 - (iii) Gradualism is not considered in modern animal classification.
 - (iv) Aristotle introduced the concept of “species”.
 - (v) Hierarchical system of classification includes six mandatory ranks.
- (3) Members of the phylum Tardigrada
- (i) live in water film that surrounds mosses
 - (ii) are mainly marine.
 - (iii) are parasites found in lungs and nasal passages of reptiles.
 - (iv) hunt by spraying with an adhesive mucous.
 - (v) are tiny, stalked, sessile animals.



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- (4) What is the false statement regarding Order: Anura?
- (i) Paedomorphosis is prominent.
 - (ii) Eversible, sticky tongue to catch insects.
 - (iii) Produce larvae with a long, finned tail.
 - (iv) Arboreal species have a water-proof skin.
 - (v) Most males have vocal sacs.
- (5) Select the false statement regarding mollusks.
- (i) Only gastropods can be found on land.
 - (ii) Calcium in the soil is a limiting factor for terrestrial members.
 - (iii) No respiratory pigments in blood.
 - (iv) Periostracum is thick in Freshwater mollusks.
 - (v) Radula can be seen only in mollusks.
- (6) Chondrichthyes fishes have
- (i) cartilaginous skeletons.
 - (ii) suctorial mouths
 - (iii) swim bladders.
 - (iv) 15 gill openings.
 - (v) unpaired fins.
- (7) What is correct regarding the Nematode mouthparts?
- (i) marine free-living nematodes have probalae to sense food items.
 - (ii) labial papillae help to suck out the contents from the host tissue.
 - (iii) tripartite lip helps nematode to attach to the animal host.
 - (iv) oral stylet is useful to feed on soil bacteria.
 - (v) Radially arranged hooks are useful to cling on to soil particles.
- (8) 'Contractile vacuole' is prominent in,
- (i) Rotifers
 - (ii) Protozoans
 - (iii) Arthropods
 - (iv) Annelids
 - (v) Nematods
- (9) The 'hyaline ectoplasm' is a characteristic found in,
- (i) lobopodia
 - (ii) filopodia
 - (iii) rhizopodia
 - (iv) axopodia
 - (v) reticulopodia

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- (10) Extreme low temperature of the environment can be tolerated by,
(i) *Cyclidium glaucoma* (ii) *Trepomonas agilis* (iii) *Chlamydomonas nivalis*
(iv) *Synura uvella* (v) *Euglena mutabilis*
- (11) Select the false statement for calanoids,
(i) The position of articulation is at the 4th thoracic segment
(ii) A single testis can observe in male calanoids
(iii) Antennules are uniramous
(iv) Antennae are biramous
(v) Furcal setae are equal in length
- (12) Maternal brood chamber is prominent in,
(i) Calanoids (ii) Cyclopoids (iii) Ostracods
(iv) Cladocerans (v) Harpacticoids
- (13) Gills at the base of legs of nymphal stages is an identical feature of Order,
(i) Plecoptera (ii) Diptera (iii) Tricoptera
(iv) Hemiptera (v) Ephemeroptera
- (14) Select the false statement on cerci.
(i) Cerci of some insect larvae are protrusible
(ii) Cerci make sense for some insect larvae
(iii) Cerci of some insect larvae are used for locomotion
(iv) Three cerci can be observed in some insect larvae
(v) Cerci are outgrowth of gills in some insect larvae
- (15) Which species use cilia for its locomotion?
(i) *Trypanosoma* (ii) *Vorticella* (iii) *Plasmodium*
(iv) *Paramecium* (v) *Arcella*

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Part B

Answer **any two (02)** questions

Time: One (01) hour

1. Explain adaptations for flight found in birds, other than feathers and wings.

2. Describe the importance of parthenogenesis in Rotifera life cycle.

3. Explain the respiration mechanisms of aquatic insects.

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