

UNIVERSITY OF RUHUNA

**BACHELOR OF SCIENCE GENERAL DEGREE LEVEL I
(SEMESTER I) EXAMINATION – DECEMBER 2020**

Subject : Zoology

Course Unit : ZOO 1112 – Invertebrate Diversity I

Time: 01½ hours

Index No :

Answer the **Part A** and **any two** questions from **Part B**.
Illegible handwriting would be penalized.

Question No.	Marks
Part A	1
	2
	3
	4
Part B	1
	2
	3
Assessment	
Total	

Part A (40 minutes)

1. (i). (a). What is meant by Nomenclature?

.....
.....

(b). Mention the major difference between polynomial nomenclature and binomial nomenclature.

.....
.....
.....

(ii). Select the correct feature/s relevant to Devonian period and mark as .

Formation of ozone layer

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Giant dragonflies

Coelacanth fish

Age of fishes

Ichthyostegia

Therapsid

4th mass extinction

Alvarez's hypothesis

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

(iii). Mention **two** importance of systematics.

.....
.....

(iv). Name **one** Protozoan species which fits to the below mentioned features/ phenomenon.

Regeneration Red tide
Sea ghost Conjugation

(v). (a). Mention **two** Protozoan species which form cysts.

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.....

(b). State **two** functions of a Protozoan cyst.

.....
.....

2. (i). Mention **any three** cell types found in mesenchyma of Poriferens.

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.....

(ii). (a). Name the structure given in figure below.

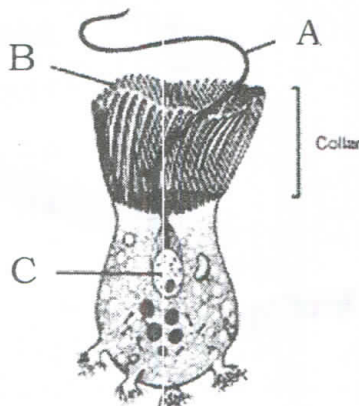
.....

(b). Name **A, B, and C**.

A: B: C:

(c). Mention **one** function of structure B.

.....



(iii). (a). State the asexual reproduction methods of Poriferens.

.....
.....
.....

(b). Mention the method of fertilization (internal or external) of following classes of Cnidarians.

Class	Fertilization method
Hydrozoa	
Scyphozoa	
Anthozoa	

(iv). Name **any three** cell types found in ectoderm of Cnidaria.

.....

(v). (a). Name the levels of organization of Porifereans based on water canal system.

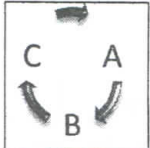
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(b). Make a **labelled line diagram** of the simplest grade of water canal system.

3. (i). Mention **any three** differences between Cestodes and Trematodes.

.....
.....
.....

(ii). Using a diagram as given below, draw a generalised life cycle of cyclophilideans.



(iii). List **two** adverse effects and **one** beneficial effect of Nematodes.

.....
.....
.....

(iv). Mention **two** evolutionary advanced features of Nematodes when compared to Platyhelminthes.

.....
.....

(v). Name **two** special sense organs of Nematodes and state where they found in their body.

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4. (i). (a). What is cephalization?

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.....

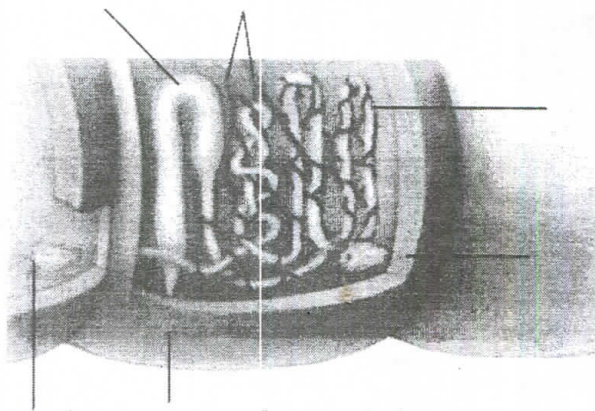
(b). Briefly explain the evolutionary significance of cephalization.

.....
.....
.....

(ii). Fill in the below given table.

Class	Ecological importance	Example (Species name)
Oligochaeta	1	1
	2	2
Polychaeta	1	1
	2	2

(iii). Identify the figure given below and name the parts.



Name of the figure :

(iv). (a). What is an indicator organism?

.....

(b). Give **examples** of Polychaeta species that can be used as bio indicators in Organic pollution and seawater temperature.

.....

(v). (a). What is Vermiculture?

.....

(b). Briefly describe how it is differed from Vermicomposting.

.....

Part B

1. **Answer both parts.**

- (i). Write a brief account on reproductive methods of Protozoans.
- (ii). Briefly describe the polymorphism of Cnidarians.

(25 minutes)

(20 marks)

2. Discuss the adaptations shown by Turbellarians for their mode of life.

(25 minutes)

(20 marks)

3. "Body structure, locomotion and feeding of Polychaeta are associated with their habitats". Justify this statement with suitable examples.

(25 minutes)

(20 marks)



For the assessment

(20 marks)

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