

**UNIVERSITY OF RUHUNA**

**BACHELOR OF SCIENCE GENERAL DEGREE LEVEL I (SEMESTER II)**

**EXAMINATION – JANUARY/FEBRUARY 2018**

**Subject : Zoology**

**Course Unit : ZOO 1202 – Invertebrate Diversity II**

**Time: 01½ hours**

**Index No : .....**

Answer the **Part A** and **any two** questions from **Part B**.

*Illegible handwriting would be penalized.*

Question No.		Marks
<b>Part A</b>	1	
	2	
	3	
	4	
<b>Part B</b>	1	
	2	
	3	
<b>Assessment</b>		
<b>Total</b>		

**Part A : Answer all. (45 minutes)**

1. (i). List **four** economic importance of Molluscs.

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(ii). Draw a sketch to indicate the bivalve filter feeding mechanism.

(iii). Indicate the function of structures a, b, c and d. Mention the specific group of Molluscs who possesses these structure.

- (a). Radula .....
- (b). Byssus .....
- (c). Hectocotylus .....
- (d). Operculum .....

(iv). (a). List Molluscan larval types.

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(b). What is the main difference of Cephalopod reproduction system and Gastropod reproduction system?

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(v). List **two** characteristic features of torsion.

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**(10 marks)**

2. (i). State **two** advantages and **two** limitations of arthropod exoskeleton.

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(ii). Name **four** sensory organs and the main stimuli for each organ found in arthropoda.

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(iii). Write the function of following organs and arthropod group which possess each organ.

		Function	Arthropod group
(a).	Malphigian tubules		
(b).	Pumping stomach		
(c).	Trachea		
(d).	Pedipalps		

(iv). Name **four** characteristic features of subphylum Crustacea.

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(v). Write **four** characteristic features used in classification of insects.

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**(10 marks)**

3. (i). Name the classes of Echinodermata having pentamerous symmetry.

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(ii). Mention mode of feeding of echinodermites giving **one** example of animal having that mode of feeding.

**Mode of feeding**

**Example**

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(iii). Using a flow diagram show how the sea water enters to tube feet of an Echinodermite (ex. A ⇒ B ⇒ C).

(iv). State **three** major functions of water vascular system of Echinodermata.

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(v). Mention **three** features of sea cucumbers that are not found in other Echinodermates.

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**(10 marks)**

4. (i). Name the larval form of Hemichordates and mention its mode of locomotion.

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(ii). What is the importance of endostyle?

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(iii). Mention **two** chordate characteristics found in Hemichordates and Cephalochordates.

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(iv). Name **two** Hemichordates belonging to the class Enteropneusta.

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(v). Name a colonial Hemichordate and briefly describe the structure of the colony organization.

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**(10 marks)**

**Part B : Answer any two questions only. (45 minutes)**

1. Write an account on characteristic features and economic importance of Chelicerata.
2. Write an account on body wall appendages found in phylum Echinodermata.
3. Discuss the structural diversity found in Urochordates.

 **For the assessment**

**(20 marks)**

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