



**THE OPEN UNIVERSITY OF SRI LANKA  
ADVANCED CERTIFICATES IN SCIENCE PROGRAMME 2021/2022**

**LEVEL 2 -- ZYF2512**

**BIOLOGY II**

**FINAL EXAMINATION**

**DURATION – THREE HOURS**

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**Date : 2023 .01.21**

**Time: 9.30 am - 12.30 pm**

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**Index No. :**

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The Question paper consists of two parts - **I and II**

**Answer all questions in Part I (A & B) and any three ( 03) questions from Part II**

- Answers for the Multiple Choice Questions in **part I -(A)** should be provided by placing **X** in the relevant cage indicating the most correct answer in the MCQ box provided.
  - Answers for the structured essay question in **part I-(B)** should be written in the space provided in the question paper.
  - At the end of the examination submit all **MCQ** questions with your answer script.
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MCQ BOX

Ques.No	a	b	c	d
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1.

**PART -1 - A**

1.1 Which of the following is the function of Lysosomes?

- (a) Packaging enzymes
- (b) Intracellular digestion
- (c) Protein synthesis
- (d) Distributing hormones

1.2 Simple squamous epithelia in man are found in the

- (a) epidermis and buccal cavity.
- (b) ducts of sweat glands and ducts of salivary glands.
- (c) urinary bladder and bowman's capsule .
- (d) alveoli and blood capillaries.

1.3 Which one of the following animal groups have an endoskeleton.

- (i) Jelly fish    (ii) Sea urchin    (iii) Lobster-    (iv) fish
- (a)    (iii),    (iv)    (c) (i) ,    (ii)
- (b)    (i),    (iii)    (d) (ii) ,    (iv)

1.4 Radial symmetry is shown by

- (a) Coelenterates
- (b) Platyhelminthes
- (c) Aschelminthes
- (d) Annelida

1.5 Which of the following is not an example for a pseudocoelomate

- (a) Round worm
- (b) Tape worm
- (c) Filarial worm
- (d) Hook worm.

1.6 The five kingdom classification was proposed by

- (a) R.H. Whittaker
- (b) C.Linnaeus
- (c) A. Roxberg
- (d) Virchow

1.7 The parotid salivary glands in human are present

- (a) in the angle between both jaws
- (b) below the ears.
- (c) below eye orbits
- (d) below the tongue

1.8 Which of the following gland represents the Simple branched alveolar gland type in human body?

- ( a ) Sweat glands ( b ) Sebaceous gland ( c ) Pyloric gland ( d ) Salivary gland

1.9 Main function of stratified squamous epithelium is,

- (a) absorption. (c) protection.  
(b) support. (d) secretion

1.10 Which one of the following is not a characteristic feature of Phylum Arthropoda.

- (a) A pair of ventral nerve cord. (c) Hydrostatic skeleton  
(b) A dorsal heart. (d) Complete digestive system

1.11 A nematode can be easily distinguished from an annelid due to,

- (a) Cylindrical shape (c) absence of external gills.  
(b) Unsegmented body. (d) absence of appendages.

1.12 Baleen is a feeding structure in

- ( a ) predacious fishes ( b ) Filter feeding whales ( c ) Whale sharks ( d ) Dolphins

1.13 Which of the following feature is common to fishes and amphibians

- ( a ) Types of respiratory structures  
( b ) Structure of the kidneys  
( c ) Number of cranial nerves  
( d ) Pattern of blood circulation through the heart

1.14 Which of the following is found both in pancreatic juice and intestinal juice ?

- (a) Amylase (b) Lipase (c) Sucrase (d) Ribonuclease

1.15 Which of the following is **incorrect** regarding Protista ?

- (a) All are single cell eukaryotes.
- (b) Some have flagella or cilia
- (c) Sexually reproduce by forming a blastula .
- (d) Most of the members are heterotrophs

1.16 Open circulatory system is found in

- (a) Arthropods and molluscs
- (b) Annelids and arthropods
- (c) Annelids and Chordates
- (d) Fishes and molluscs.

1.17 Amphibian heart has

- (a) two auricles and two ventricles
- (b) two auricles and one ventricle
- (c) one auricle and two ventricles
- (d) one auricle, one ventricle and one sinus Venosus

1.18 Incomplete double circulation is found in

- (a) Amphibia
- (b) Reptilia
- (c) Fishes
- (d) Both (a) and (b)

1.19 Which of the following substance is not found in Glomerular filtration fluid in man

- ( a ) Glucose
- ( b ) Plasma proteins
- ( c ) urea
- ( d ) K+

1.20 Presence of Four chambered stomach is characteristic feature of

- ( a ) carnivorous mammals
- ( b ) flying birds
- ( c ) Herbivorous mammals
- ( d ) Crocodiles

1.21 Birds nitrogenous waste product is Uric acid and it is helpful in

- (a) conserving body heat
- (b) Eliminating excess water
- (c) Conserving water
- (d) Eliminating excess body heat

1.22 Tubular digestive system is not seen in

- (a) Earthworm
- (b) *Hydra*
- (c) *Ascaris*
- (d) Prawn

1.23 Which of the followings are mainly reabsorbed from Henle's loops?

- (a) Pottasium and Chloride
- (b) Water and NaCl
- (c) Glucose and Potasium
- (d) Urea and NaCl

1.24 Which of the following structure is responsible for storing and maturing sperms in the male human reproductive system?

- (a) Seminal vesicles
- (b) Epididymis
- (c) Prostate gland
- (d) Vas deference

1.25 Select the incorrect combination regarding the animal and the reproduction methods.

- (a) Internal fertilization - Lizards
- (b) Oviparity - Parrot
- (c) Viviparity - Snake
- (d) Metamorphosis - Butterfly

**PART- I - B - Structured essay Questions**

1. Some structures found among animals are given below.

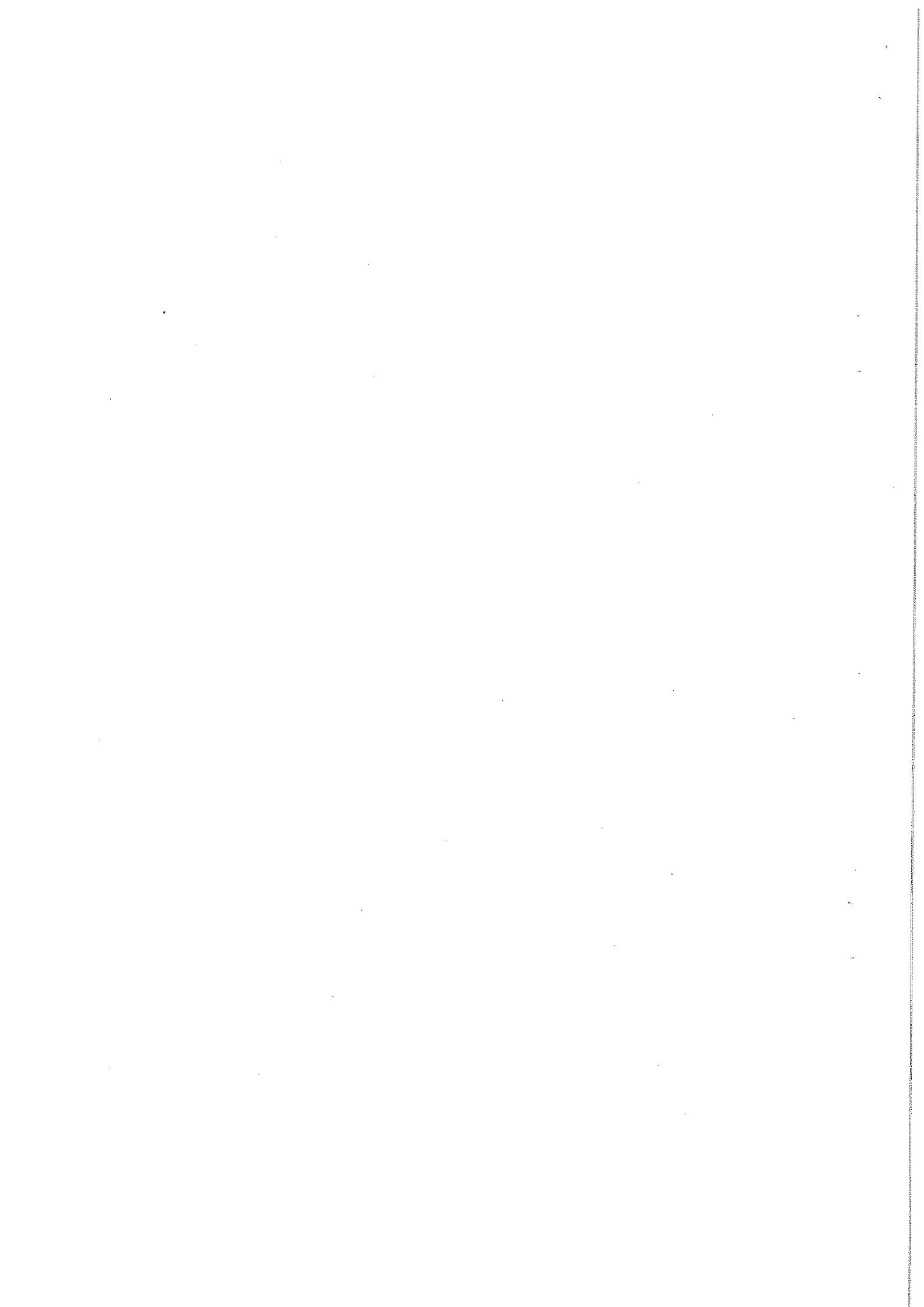
- (a). Antennae
- (b). Tentacles
- (c). Chelicerae
- (d) Flagella
- (e) Suckers
- (f). Keel
- (g). Radula
- (h). Setae
- (i) . Fragile arms
- (j) Tympanic membrane

Filling the blanks giving the relevant above structure ( a to j ) for the following animals.

- (i) Centepede .....
- (ii) *Sea anemone* .....
- (iii) Scorpion .....
- (iv) *Giardia* .....
- (v) Brittle star .....
- (vi) Frog .....
- (vii) Bird .....
- (viii) Leech .....
- (ix) Earth worm .....
- (x) Snail .....

2.Name the vertebrate class/classes that show/shows the following characters.

- (a) External fertilization .....
- (b) Digits ending claws .....
- (c) Absence of teeth .....
- (d) Presence of diaphragm .....





## PART - II

Answer any three (03) questions.

- (2) (a) What are the characteristic features of respiratory surfaces ?  
(b) Briefly describe respiratory structures found in animals.
- (3) (a) List the characteristic features of phylum Echinodermata.  
(b) Briefly discuss the characteristic features of classes belong to phylum Echinodermata.
- (4) (a) Describe the structure of human heart.  
(b) List the functions of blood in human body.
- (5) Outline the process of digestion of food in the human digestive system.
- (6) Write short notes on any **two (02)** of the followings
- (a) Asexual reproductive methods in invertebrates.
  - (b) Excretory organs in animals.
  - (c) Nervous tissue
  - (d) Symbiotic nutrition

