



THE OPEN UNIVERSITY OF SRI LANKA

ADVANCED CERTIFICATES IN SCIENCE PROGRAMME - 2023

LEVEL 2 – ZYF2512

BIOLOGY II

FINAL EXAMINATION

DURATION – THREE HOUR

Date : 2024.01.27

Time: 9.30 am - 12.30 pm

Index No. :

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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Index No.-----

MCQ BOX

Ques.No	a	b	c	d
1.1				
1.2				
1.3				
1.4				
1.5				
1.6				
1.7				
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1.10				
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1.23				
1.24				
1.25				

PART - 1- A- Multiple choice questions

1.

1.1 Which of the following cell organelle is not bound by a membrane ?

- (a) Mitochondria (b) Ribosome (c) Lysosome (d) Golgibody

1.2 Which of the following tissue is seen in epiglottis of human larynx

- (a) Areolar tissue (c) Dense irregular connective tissue
(b) Elastic cartilage (d) Hyaline cartilage

1.3 Pseudo-stratified columnar epithelium can be found in

- (a) Salivary glands (c) Fallopian tubes
(b) Urinary bladder (d) Large excretory ducts

1.4 Diploblastic animals are found in phylum.

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

1.5 Which of the following animal is not a Pseudocoelomate ?

- (a) Round worm (b) Hook worm (c) Filarial worm (d) Earth worm

1.6 Amphibians belong to super class

- (a) Chondrichthyes (b) Agnatha (c) Gnathostomata (d) Osteichthyes

1.7 Limbless amphibian species is

- (a) Frog (b) Salamander (c) Ichthyophis (d) Bufo

1.8 Which of the following is incorrect regarding the Reptilia

- (a) Body is covered by dry cornified epidermal scales
(b) Body is comprised into head, neck, trunk and tail.
(c) Heart is usually three chambered with partially divided ventricle
(d) Respiration occurs through lungs and skin.

1.9 Presence of heterocercal tail ,placoid scales are characteristic to class

- (a) Osteichthyes (c) Acanthodi
- (b) Placodermi (d) Chonrtichthyes

1.10 The outer covering of lungs is called,

- (a) Perichondrium (b) Plural membrane (c) Pericardium (d) Peritonum

1.11 The function of gall bladder is

- (a) storage of bile (c) Formation of bile
- (b) concentration of bile (d) Both (a) and (b)

1.12 Which of the following is incorrect regarding the gastric juice

- (a) Gastric juice of infant contain rennin enzyme
- (b) It contains small amount of lipase
- (c) Gastric juice is secreted by gastric glands
- (d) It makes alkaline medium for enzyme reactions.

1.13Bicuspid valve is found between

- (a) left atrium and left ventricle (c) right atrium and left ventricle
- (b) right atrium and right ventricle (d) left atrium and right ventricle

1.14 Contraction of right ventricle pumps blood into

- (a) dorsal aorta (d) pulmonary vein
- (b) coronary artery (d) pulmonary arteries

1.15 Green glands are excretory organs in

- (a) Spiders and Scorpions (c) Annelids
- (b) Insects (d) Crustaceans

1.16 The least toxic nitrogenous waste is

- (a) Ammonia (b) Creatinine (c) Urea (d) Uric acid

1.17 Which of the following enzyme in the human body involves to start the protein digestion?

- (a) Trypsin (b) Lactose (c) Pepsin (d) Lypase

1.18 Which one of the following is not an enzyme of Pancreatic juice ?

- (a) Trypsin (b) Chymotrypsin (c) Enteropeptidase (d) Pepsin

1.19 Birds produce their main excretory product as uric acid for

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

1.20 Coelenterates asexually reproduce by

- (a) budding (b) using gametes (c) regeneration (d) Sporocyst

1.21 Binary fission is seen in

- (a) *Hydra* (b) *Paramecium* (c) Star fish (d) *Taenia*

1.22 Oparin's theory of origin of life is based on

- (a) Chemical evolution (c) Artificial evolution
(b) Cosmic evolution (d) Organic evolution

1.23 Which of the following was not present in the primitive atmosphere

- (a) Oxygen (b) Methane (c) Hydrogen (d) Water vapour

1.24 Earliest life forms began on the earth as

- (a) Autotrophs (b) Cyanobacteria (c) Photoautotrophs (d) Chemoheterotrophs

1.25 Darwin's finches discovered from the Galapagos islands helped to explain

- (a) mimicry (c) camouflage
(b) seasonal migration (d) variation

PART 1 - B (Structured essay questions)

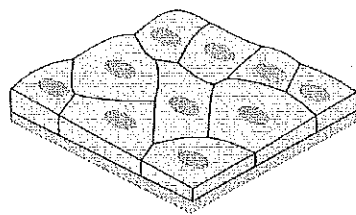
2.

2.1. Define the term Epithelial tissue

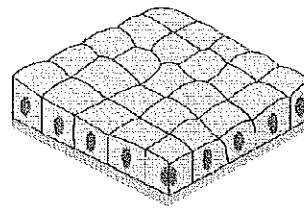
2.2. Give three (03) functions of epithelial tissue

- i. -----
- ii. -----
- iii. -----

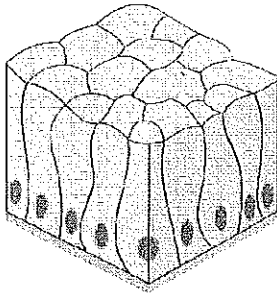
2.3. Following figure represents the three different types of epithelial tissues in human body.



A



B



C

Figure 01

2.4. i. Identify the tissue types and give one location for each in human body

Name	Location
A-----	-----
B. -----	-----
C. -----	-----

ii. Give the functions of above mentioned epithelial tissues

A.-----

B.-----

C.-----

3.. Mention the phylum in which the following characteristic features are present .

a. Presence of pseudopodia -----

b. Asymmetrical body having flagellated cells
called choanocytes -----

c. Bilateral symmetry and absence of
complete digestive systems -----

d. Presence of pedicellaria and water vascular system -----

e. Triploblastic and presence of metameric segmented body -----

f. Soft bodied , and presence of radula -----

g. Presence of exoskeleton with jointed
appendages in body segments -----

4. Write one characteristic feature of the following animal groups

a. Chondrichthyes -----

b. Amphibia -----

c. Reptilia -----

d. Aves -----

e. Mammalia -----

PART II

three (03)

Answer any four (04) questions

2. (a) List the characteristic features of the phylum Annelida
(b) Name the classes of the phylum annelid and briefly explain characteristic features of these classes
3. (a) What is meant by digestion ?
(b) What are the two types of digestion methods found in animals and briefly define each one
(c) Discuss the different digestive systems seen in invertebrates.
4. (a) Define the term excretion
(b) Explain the different types of excretory structures seen in animals.
5. (a) Briefly describe the pulmonary and coronary circulation of human heart.
(b) Briefly explain the different types of circulatory systems found in animals.
(c) What are the functions of blood.
6. Write short notes any two (02) of the followings
 - (a) Asexual reproduction in invertebrates
 - (b) Respiratory structures of animals
 - (c) Osmoregulation in aquatic animals
 - (d) Feeding mechanisms in heterotrophic animals.
