

THE OPEN UNIVERSITY OF SRI LANKA

CREDIT CERTIFICATES FOR FOUNDATION PROGRAMME IN SCIENCE-  
2018/2019

LEVEL 1 – BZF 1502

BIOLOGY II

FINAL EXAMINATION

DURATION – THREE HOUR

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Date: 2019.12.29

Time: 1.30 pm - 4.30 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 and any three (03) questions from Part II**

- Answers for the Multiple Choice Questions in **part I** 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** 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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1.22				
1.23				
1.24				
1.25				

PART I

1.A

1.1 Which of the following was not present in primitive atmosphere ?

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

1.2 First life on earth was

- (a) Cynobacteria.
- (b) autotrophs .
- (c) photoautotrophs.
- (d) chaemoheterotrophs.

1.3 Cuboidal epithelium can be found in,

- (a) distal convoluted tubule
- (b) proximal convoluted tubule
- (c) Henle's loop.
- (d) Both (a) & (b)

1.4 An epithelial tissue which has thin flat cells, arranged edge to edge so as to appear like closely packed tiles, is characteristics to,

- (a) squamous epithelium.
- (b) columnar epithelium.
- (c) pseudostratified epithelium.
- (d) ciliated columnar epithelium.

1.5 Golgi apparatus is an important site for the formation of,

- (a) proteins and lipids.
- (b) glycoproteins and glycolipids.
- (c) carbohydrates and proteins.

(d) glucose and lipids.

1.6 Digestion of carbohydrates starts from,

(a) buccal cavity.

(b) stomach.

(c) small intestine.

(d) duodenum.

1.7 Enterokinase is secreted by

(a) pancreas.

(b) stomach.

(c) small intestine.

(d) large intestine.

1.8 Which one of the following statements is **incorrect** about bile?

(a) It contains bilirubin and biliverdin as waste products.

(b) Bile salts in the emulsification of fat.

(c) It activates lipase.

(d) Bile contain digestive enzymes.

1.9 Which of the following is not a function of gastric HCl secretion?

(a) Kill the bacteria ingested with food.

(b) Activate the proteins secreted by the stomach.

(c) Denature proteins and to break inter molecular bonds.

(d) Stimulate gastric production.

1.10 Commensalism is an association between two species where,

(a) one species is harmed and other is benefited.

(b) both species are benefited.

(c) one species is benefited and other is unaffected.

(d) both species are harmed.

1.11 An artery is,

- (a) thick walled in which blood flows under low pressure.
- (b) thick walled in which blood flow under high pressure.
- (c) thin walled in which blood flows under high pressure.
- (d) thin walled in which blood flows under low pressure.

1.12 General body cavity of an arthropod is called a

- (a) haemocoel.
- (b) pseudocoel.
- (c) acoelom.
- (d) none of the above.

1.13 Coxal glands are excretory organ of,

- (a) spiders and scorpion.
- (b) insects.
- (c) annelids.
- (d) molluscs

1.14 Which one of the following feature is not unique to phylum echinodermata.

- (a) Locomotion by tube feet
- (b) Presence of ambulacral region
- (c) Presence of water vascular system
- (d) Deuterostomic development

1.15 A limbless amphibian is,

- (a) *Ambystoma*
- (b) *Amphiuma*
- (c) *Necturus*

(d) *Ichthyophis*.

1.16 Swim bladder in most fishes act as a

- (a) respiratory organ.
- (b) hydrostatic organ.
- (c) respiratory organ associated with lungs.
- (d) hydrostatic organ as an outgrowth of alimentary canal.

1.17 Identify the larva which is present only in members of gastropods.

- (a) Trochophore larvae
- (b) Velliger larvae
- (c) Glochidium larvae
- (d) Muller 's larvae

1.18 Ink glands as a means of escape from predators are present in

- (a) Gastropoda.
- (b) Pelecypoda.
- (c) Cephalopoda.
- (d) Scaphopoda.

1.19 Free living platyhelminthes forms belong to the class

- (a) Cestoda.
- (b) Trematoda.
- (c) Turbellaria.
- (d) Nematoda.

1.20 Which of the following membrane is responsible for the protection of the heart ?

- (a) Epicardium
- (b) Endocardium
- (c) Myocardium

(d) Pericardium

1.21 Which of the following is not a function of the respiratory system?

- (a) Regulate blood pH
- (b) Helps in gaseous exchange
- (c) Protection against blood loss
- (d) Contains receptors for the sense of smell

1.22 Nitrogenous excretory product of frog tadpole is ,

- (a) ammonia.
- (b) urea.
- (c) uric acid.
- (d) protein.

1.23 Pulmonary circulation is required for,

- (a) nutrient supply to lungs.
- (b) elimination of waste products from the lungs
- (c) oxygenation of deoxygenated blood.
- (d) nutrient supply to heart.

1.24 Which of the following organisms reproduce asexually?

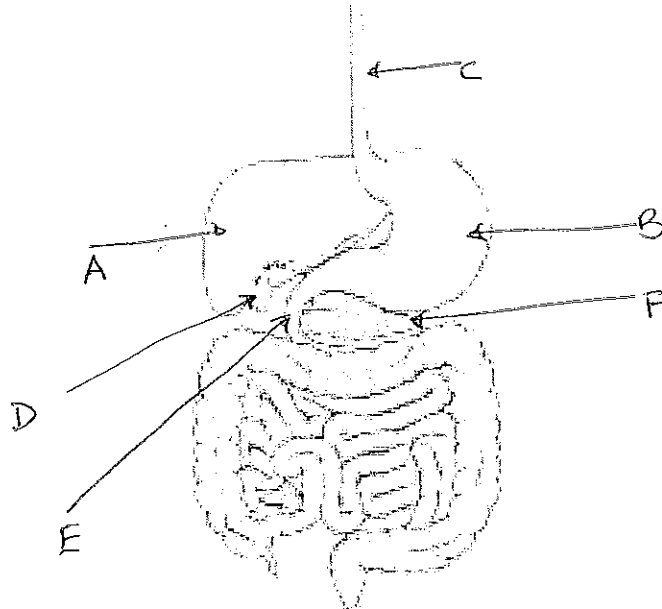
- (a). Rts
- (b). Mosquitoes
- (c). Bacteria
- (d). Shark.

1.25 Select the incorrect statement.

- (a) In asexual reproduction , the off springs are morphologically and genetically identical to the parent.
- (b) Zoospores are sexual reproductive structures.
- (c) In asexual reproduction, a single parent produces offspring with or without the formation of gametes.
- (d) Budding is asexual reproductive method seen in *Saccaromyces*.

B.

Structured essay questions



(i) Identify Figure 1.

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(i) Labelled the parts A –G and give one main function of each.

Name	Function
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- |        |       |
|--------|-------|
| A----- | ----- |
| B----- | ----- |
| C----- | ----- |
| D----- | ----- |
| E----- | ----- |
| F----- | ----- |
| G----- | ----- |

(ii) Name the special structural adaptation seen in the organ G for relevant function

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(iii) Name the special movements can be seen in structure C

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(iv) What are the three proteolytic enzymes secreted by organ F

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(v) Give one hormone which is secreted by organ B

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(vi) State two hormones which are secreted by organ F and give functions of them

-1.-----

2.-----

2. Some structures found in invertebrates are as follows;

(a) Clitellum (b). Scolex (c). Antennae (d). Tentacles (e). Suckers

(f). Internal skeleton (g). Radula (h). Pedicelaria

Which of the above structures is/are found in each of the animal groups given below;

- i. Cephalopoda -----
- ii. Asteroidea -----
- iii. Cestoda -----
- iv. Hirudenea -----
- v. Trematoda -----
- vi. Oligochaeta -----
- vii. Anthozoa -----

3. State the types of asexual reproduction patterns seen in the following organisms

(a). *Paramecium* -----

(b) *Plasmodium* -----

(c) *Hydra* -----

(d) Bees -----

(e) *Planaria* -----

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**PART – II - Essay type questions**

Answer any **three (03)** questions

2. (a) List the characteristic features of phylum Arthropoda  
(b) Name the classes of this phylum and briefly explain characteristic features of these classes.
3. (a) Describe the structure of human nephron ?  
(b) Briefly explain the mechanism of producing concentration of urine.
4. Discuss the feeding mechanisms in heterotrophic animals?
5. (a) Describe the processes of spermatogenesis.  
(b) List out the differences between Oogenesis and Spermatogenesis
6. Write short notes any **two (02)** of the following
  - (a) Human blood
  - (b) Osmoregulation in aquatic animals
  - (c) Muscular tissue
  - (d) Respiratory structures found in animals

