

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034****B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY****THIRD SEMESTER – NOVEMBER 2022****UAZ 3501 – ANIMAL PHYSIOLOGY AND BIOCHEMISTRY**

Date: 24-11-2022

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION A**Answer ALL the Questions**

SECTION A			
Answer ALL the Questions			
1.	Definitions	(5 x 1 = 5)	
a)	Nutrition	K1	CO1
b)	Stroke volume	K1	CO1
c)	Osmoregulation	K1	CO1
d)	Parathormones	K1	CO1
e)	Active site of an enzyme	K1	CO1
2.	Fill in the blanks	(5 x 1 = 5)	
a)	The _____ cells secrete HCl in stomach	K1	CO1
b)	Pulsating heart is seen in _____	K1	CO1
c)	Organisms that actively regulate their osmotic pressure are called _____	K1	CO1
d)	Parafollicular cells of thyroid also refers to _____	K1	CO1
e)	An enzyme with its co-factor removed is designated as _____	K1	CO1
3.	Match the following	(5 x 1 = 5)	
a)	Villi - Acetyl choline esterase	K2	CO1
b)	Alveoli - Absorbtion	K2	CO1
c)	Haemoglobin - Filtration	K2	CO1
d)	Glomerulus - Diffusion of gases	K2	CO1
e)	Synapse - Oxygen	K2	CO1
4.	True or False	(5 x 1 = 5)	
a)	The secretions from pancreas drained into the duodenum to reduce the acidity of the chyme.	K2	CO1
b)	Only one cardiac cycle is completed in double circulation.	K2	CO1
c)	Aquatic invertebrates, bony fishes and aquatic amphibians are ammnotelic organisms.	K2	CO1
d)	Prolactin secreted from posterior pituitary.	K2	CO1
e)	Transfer of amino groups from one amino acid to other by an enzyme Hydrolase	K2	CO1

SECTION B**Answer any TWO of the following in 100 words (2 x 10 = 20)**

5.	Describe the general organisation of alimentary canal.	K3	CO2
6.	Explain the role of intercostal muscles and diaphragm for respiration	K3	CO2
7.	Explain the conduction of nerve impulse across the membrane.	K3	CO2
8.	Describe the factors affecting enzyme action.	K3	CO2

SECTION C**Answer any TWO of the following in 100 words (2 x 10 = 20)**

9.	Classify fat soluble vitamins and enumerate the sources, functions and characteristic deficiencies.	K4	CO3
10.	Determine the importance of different valves and their function in circulation.	K4	CO3
11.	Illustrate and explain the mechanism of osmoregulation in fresh water fishes.	K4	CO3
12.	Classify enzymes and explain them with an example.	K4	CO3

SECTION D**Answer any ONE of the following in 250 words (1 x 20 = 20)**

13.	Compare the artery and veins for transporting oxygenated and deoxygenated blood from lungs and various parts of the body.	K5	CO4
14.	'Pituitary gland is referred as master gland' Justify.	K5	CO4

SECTION E**Answer any ONE of the following in 250 words (1 x 20 = 20)**

15.	Compile the functions of nephrons in filtration and urine formation.	K6	CO5
16.	Correlate the process of addition and removal of water and CO ₂ and the gain of energy in Kreb's cycle.	K6	CO5

\$\$\$\$\$\$