LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **ADVANCED ZOOLOGY AND BIOTECHNOLOGY**

THIRD SEMESTER – **APRIL 2023**

UAZ 3501 – ANIMAL PHYSIOLOGY AND BIOCHEMISTRY

Date: 02-05-2023 Dept. No. Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A

Answer ALL the Questions

1.	**Definitions**		**(5 x 1 = 5)**
a)	Digestion	K1	CO1
b)	Respiratory quotient	K1	CO1
c)	Nissl bodies	K1	CO1
d)	Acromegaly	K1	CO1
e)	Apo and holoenzyme	K1	CO1
2.	**Fill in the blanks**		**(5 x 1 = 5)**
a)	_____ are the organisms that engulf fluid food through the body surface.	K1	CO1
b)	The enzyme carbonic anhydrase is present in _____cells.	K1	CO1
c)	The _____ is the stroke volume of heart.	K1	CO1
d)	The _____ is the structural and functional unit of kidney.	K1	CO1
e)	The hormone oxytocin is secreted by _____	K1	CO1
3.	**Match the following**		**(5 x 1 = 5)**
a)	Bile - Saltatory conduction	K2	CO1
b)	Chlorocruorin - Enzyme	K2	CO1
c)	Myelin sheath - Pigment	K2	CO1
d)	Hypotonic - Emulsifier	K2	CO1
e)	Active site - Endosmosis	K2	CO1
4.	**True or False**		**(5 x 1 = 5)**
a)	Absorption of nutrients takes place in oesophagus.	K2	CO1
b)	Fresh water animals excrete dilute urine.	K2	CO1
c)	Hormones are chemical messengers secreted by glands.	K2	CO1
d)	The breakdown of glycogen is called glyconeogenesis.	K2	CO1
e)	Enzymes are made up of amino acids.	K2	CO1

SECTION B

Answer any TWO of the following in 100 words			**(2 x 10 = 20)**
5.	Describe how carbohydrate absorbed and assimilated.	K3	CO2
6.	Explain the structure of heart.	K3	CO2
7.	Explain the synaptic transmission with a diagram.	K3	CO2
8.	Describe the mechanism of enzyme action and add a note on its theories.	K3	CO2
	SECTION C		
Answer any TWO of the following in 100 words			(2 x 10 = 20)
9.	Classify respiratory pigments and their role in respiration.	K4	CO3
10.	Enumerate the secretions and functions of thyroid gland.	K4	CO3
11.	Relate how branching and elongation enzymes involved in glycogen formation in order to prevent excess glucose in blood.	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.	Assess the role of enzymes in digestion secreted by different regions of alimentary canal.	K5	CO4
14.	Estimate the breakdown of glucose as a source of energy with reference to glycolysis.	K5	CO4
	SECTION E		
Answer any ONE of the following in 250 words			**(1 x 20 = 20)**
15.	Correlate the process of diffusion in exchange of gases in blood and lungs.	K6	CO5
16.	Summerise the functions of nephrons in filtration and urine formation.	K6	CO5

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