STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600086
(For candidates admitted during the academic year 2023 - 2024)

B.Sc. DEGREE EXAMINATION-NOVEMBER 2024
BRANCH VI.A – ADVANCED ZOOLOGY AND BIOTECHNOLOGY
THIRD SEMESTER

COURSE : MAJOR CORE
PAPER : ANIMAL PHYSIOLOGY
SUBJECT CODE : 23ZL/MC/AP34
TIME : 3 HOURS MAX.MARKS:100

Q. No.	SECTION A **Answer all questions (10 x 2 = 20 marks)**	CO	KL
1.	Give one word for each of the following statements: a) Organisms that make their own food b) Organisms that feed on dead and decaying organic matter	CO1	K1
2.	Fill in the blanks a) Haemoglobin concentration is increased in people who live at _____ altitudes. b) A Sperm Whale can stay under water for nearly _____ minutes.	CO1	K1
3.	State whether True or False a) Double circulation involves a pulmonary route and a systemic route. b) The formula for cardiac output is heart rate x blood pressure.	CO1	K1
4.	Choose the correct answer a) During an angiogram, a special type of contrasting material such as _____ is injected into the blood vessels of the heart. i) Chlorine ii) Bromine iii) Iodine iv) Fluorine b) Which of the following cardiac parameters can an echocardiogram reveal? i) Size of the heart ii) Thickness of the heart's walls iii) Pumping strength iv) all the options	CO1	K1
5.	Give the function of the following: a. Myelin sheath b. Arginase	CO1	K1
6.	Expand a) TMAO b) MSH	CO1	K1
7.	Name any two chemical messengers that are used to communicate in the autonomic nervous system.	CO1	K1
8.	Give one example for each of the following: a) Neurohaemal organ in insects b) Chromatophore containing red pigment	CO1	K1
9.	Associate the symptom with the disease or disorder. a) Low levels of Alpha -1 – antitrypsin b) Bradykinesia	CO1	K1
10.	Name the theory. a) Loss of elasticity in the skin, tendons and blood vessels with increase in age b) Decreased interaction between aged person and others in his/her social system	CO1	K1

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Q. No.	SECTION B Answer all questions (10 x 2 = 20 marks)	CO	KL
11.	Give any two properties of respiratory surfaces with reasons for their presence.	CO2	K2
12.	Identify any two ways by which smoking can affect humans.	CO2	K2
13.	Highlight any two factors that influence blood pressure.	CO2	K2
14.	Identify any two cooling strategies in insects.	CO2	K2
15.	Illustrate a neuromuscular junction with the help of a neat, labelled diagram.	CO2	K2
16.	Distinguish between the two categories of autonomic nerves.	CO2	K2
17.	Compare and contrast electroreception and magnetoreception.	CO2	K2
18.	Distinguish between hemiplegia and quadriplegia.	CO2	K2
19.	Summarise the role of any two placental secretions.	CO2	K2
20.	Discuss any two ways by which blood doping can be achieved.	CO2	K2
Q. No.	**SECTION C** **Answer any two questions. (2 x 10 = 20 marks)**	**CO**	**KL**
21.	Apply your knowledge of the circulatory system to distinguish between the open and closed types of circulation.	CO3	K3
22.	Examine the characteristics and effects of endocrine disruptor chemicals in humans.	CO3	K3
23.	Identify the causes and symptoms of Alzheimer's Disease.	CO3	K3
Q. No.	**SECTION D** **Answer any two questions. (2 x 15 = 30 marks)**	**CO**	**KL**
24.	Analyse the various feeding mechanisms employed by animals to obtain and consume their food.	CO4	K4
25.	Explain the different osmoregulatory mechanisms exhibited by terrestrial vertebrates.	CO4	K4
26.	Organise the physiological changes related to Ageing based on the different organ systems in the human body.	CO4	K4
Q. No.	**SECTION E** **Answer any two questions. (2 x 5 = 10 marks)**	**CO**	**KL**
27.	Evaluate the effects of digoxin on the heart.	CO5	K5
28.	Classify animals based on their excretory products.	CO5	K5
29.	Some animals use bioluminescence in self-defense. Justify.	CO5	K5

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