REV-01 MSZ/14/19

2023/12

SET

M.Sc. ZOOLOGY FIRST SEMESTER (REPEAT) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY MSZ-102

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Objective

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1×20=20

- The small 'bump' formed by Graafian follicle on the surface of ovary is called: a. Cortex b. Medulla c. Stigma d. Antrum
 - The enzyme which converts androgen to estrogen is called:

b. Aromatase

a. Carboxylase c. Hydrolase

d. None

Progesterone is produced by:

a. Corpus luteum

b. Adrenal gland

c. Placenta

d. All of these

The function of C chain of Insulin is:

a. Enzyme activation

b. Carbohydrate metabolism

c. Protein synthesis

d. All of these

Binding of iodine with thyroglobulin molecule is called:

a. Iodide trapping

b. Thyroid peroxidation

c. Organification

d. None of these

Electric potential of a nerve cell membrane in resting state is:

a. -60mV

b. -70mV

c. -80mV

d. -90mV

7. Select the correct components of limbic system of brain.

a. Amygdela, hippocampus,

b. Hypothalamus, hypophysis, pons

hypothalamus

c. Thalamus, tectum, vermis

d. Hypophysis, medulla oblongota, brain stem

Number of cranial nerves in mammals is:

a. 10 pairs

b. 12 pairs

c. 31 pairs

d. None

9. Bands of nerves at posterior terminal of spinal cord is:

a. Cauda equina

b. Forman magnum

c. Corpus callosum

d. Basal ganglia

10. Sustained contraction of muscle due to repeated stimuli is called:

a. Twitch

b. Summation

c. Fatigue

d. Tetanus

USTM/COE/R-01

1	1. Which of these blood cells play role in cor	ntrolling asthma?		
	a. Basophil	b. Eosinophil		
	c. Both a & b	d. None		
1	Which is the correct sequence of cells of the myelocyte series as they appear during genesis of white blood cells?			
	 a. Myeloblast, promyelocyte, megakaryocyte 	 Megakaryocyte, myeloblast, promyelocyte 		
	 Myeloblast, megakaryocyte, promyelocyte 	 d. Promyelocyte, Megakaryocyte, myeloblast 		
1	pressure?	mHg, blood colloid osmotic pressure is are is 10mmHg, then what is the net outward		
	a. 10 mmHg	b. 15 mmHg		
	c. 20 mmHg	d. 25 mmHg		
1	4. The enzyme renin is produced by:			
	a. Renal pyramid	b. Major calyx		
	c. Distal tubule	d. Juxtaglomerular apparatus		
1	. Which of these arteries lead to afferent arteriole?			
	a. Arcuate artery	b. Lobar artery		
	c. Interlobular artery	d. Segmental artery		
1	. Which one of the following is not the effect of complete acclimatization?			
	a. Formation of new protein	b. Refolding of damaged proteins		
	c. Pulmonary ventilation improved	d. Increases the risk of heart injury		
1	As a result of Bohr effect, oxygen dissociation curve moves:			
	a. Right	b. Left		
	c. Up	d. Down		
18. Which one of the following is the effect of temperature extreme (hot/cold)				
	a. Enzymatic reactions hampered	b. Sweating		
	c. Shivering	d. Pilorelaxation		
19				
•	9. What are the substances produced by bac body's requirements?	teria present in the large intestine to rulling		
	a. Vitamins	b. Proteins		
	c. Starch	d. Lipids		
2	0. Which one of the following anymor same	·		
_	Which one of the following enzymes converts milk to curd inside the stomach? a. Pepsin b. Renin			
	c. Mucin	b. Renin		
	S. MIRCHI	d. Ptyalin		

$\left(\underline{\text{Descriptive}} \right)$

Time: 2 hr. 30 mins.		Marks: 50
[Answer question no.1 & any four (4) from the rest]		
1.	Write how the neurons are classified. Explain the ultrastructure of a neuron.	4+6=10
2.	Name the various contractile proteins present in muscle. Explain the molecular mechanism of contraction of skeletal muscle.	2+8=10
3.	What is thermal stress? Discuss the neural and hormonal regulations of thermal stress.	2+8=10
4.	What is glycogenolysis and gluconeogenesis? Mention the activities of insulin and glucagon. Name the hormones involved in digestion of food.	4+4+2=10
5.	What is hemostasis and what are the events involved? Explain the process of blood coagulation.	4+6=10
6.	Write down the organs and functions of urinary system. Discuss the formation of urine in nephron.	5+5=10
7.	Describe the structure of testis. Draw a schematic diagram of testicular hormone biosynthesis. What are the main functions of testicular hormones?	4+3+3=10
8.	 Write short notes on <i>any two</i>: a) Biosynthesis of estrogen and its functions. b) Biosynthesis of insulin and structure of insulin receptor. c) Types of hormone receptors. d) Secretion and functions of posterior pituitary hormone. 	2×5=10

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