

MSZ
First Semester
Animal Physiology, Endocrinology and Neuroscience
(MSZ-03)

Duration: 3Hrs.

Full Marks: 70

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Answer the following (any five):

2x5=10

- a) Mention the role of salivary amylase in digestion.
- b) What is pheromone? Define with examples.
- c) 'Placenta can act an endocrine unit', Justify with reasons.
- d) What are Glucocorticods?
- e) Define endothermy.
- f) Write four differences each between aestivation and hibernation.
- g) Define the different cells of the pancreas.

2. Answer the following (any five) :

3x5=15

- a) Discuss the role of pancreatic enzymes indigestion.
- b) What are the pace maker and pace setter of a human heart. Mention the functions of both of these.
- c) Discuss the various phases of Estrous cycle.
- d) Discuss on the neuronal factors that plays a vital role in ageing.
- e) Write a brief note on stress and hormones.
- f) Aspects of chemoreception-Discuss.
- g) What are the different mechanisms of Thermoregulation.

3. Answer the following (any five) :

5x5=25

- a) Give an account on hypothalamus and its hormones.
- b) What is a neuron? Describe the origin and micropropagation of nerve impulse in a non-myelinated nerve fiber.
- c) Discuss on the role of gonadotropins and steroids in estrous cycle.
- d) Explain the counter current theory of urine formation with suitable diagram.
- e) How is oxygen transported in blood? Discuss the Oxygen dissociation curve and its physiological significance.
- f) Elaborate on the patterns of nitrogen excretion in different animal groups.
- g) Write an essay on Bioluminescence.

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PART A: Objective

Duration: 20 minutes

Marks – 20

Select the correct answer:

1 × 20 = 20

1. Uricotelic animals
 - a) Excrete Amonia as their principal waste
 - b) Excrete urea as principal waste
 - c) Uric acid
 - d) Both Urea and uric acid
2. cardiac stroke volume is
 - a) Is the amount of blood, pumped by ventricle in one beat
 - b) It is the amount of blood pumped by the ventricle in one minute
 - c) Its normal value is 5040
 - d) Its normal value is 40ml
3. The basic functional unit of human kidney is
 - a) Nephron
 - b) Pyramid
 - c) Henles' loop
 - d) Ornithine cycle
4. Which part of nephron is impermeable to water
 - a) PTC
 - b) DTC
 - c) Descending limb of Henle
 - d) Ascending limb of Henle
5. Amount of Haemoglobin in a normal adult man is
 - a) 28gm/ml
 - b) 15gm/ml
 - c) 23gm/ml
 - d) 40gm.ml
6. Axons carry .
 - a) Impulse into the cell
 - b) Out of the cell
 - c) Both
 - d) None
7. Erythropoiesis is
 - a) Breaking of RBC
 - b) formation of RBC
 - c) Collection of RBCs
 - d) All of the above.

8. Growth hormone release- inhibiting hormone is also called
- a) Somattropin
 - b) Somatostatin
 - c) Prolactin
 - d) None
9. Cone cells are sensitive to
- a) Bright light
 - b) Dim light
 - c) Both
 - d) None.
10. Most carbon dioxide is carried in blood as
- a) Oxyhemogbobin
 - b) Carbonic anhydrase
 - c) Bicarbonate
 - d) Carbaminohemoglobin
11. All vertebrates have
- a) An open circulatory system
 - b) A closed circulatory system
 - c) A four chambered heart
 - d) Both b & c
12. Glomerular filtration moves fluid into –
- a) Collecting ducts
 - b) Proximal tubules .
 - c) Glomerular capillaries
 - d) Bowmans capsule.
13. Bile has role in digestion and absorption of
- a) Carbohydrate
 - b) Protein
 - c) Fat
 - d) Amino acid
14. Digestion is completed and most nutrients are absorbed in the
- a) Mouth
 - b) small intestine
 - c) Stomach
 - d) colon
15. Chemoreceptors play a role in the sense of
- a) Hearing
 - b) smell
 - c) Vision
 - d) pain
16. Thermoregulation is also called as _____
17. Visual pigment of Rod cell is _____
18. Endocrine glands are _____ glands
19. Blood is a _____ tissue.
20. Hormone term was introduced by _____
