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PZOM 31**

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2020.

Third Semester

Zoology

ANIMAL PHYSIOLOGY

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer

1. Daily requirement of dietary protein to human is
 - (a) 1g / kg body weight
 - (b) 40 g
 - (c) 33 g
 - (d) 45 g

2. Secretin induces the secretion of
(a) HCl (b) HNO₃
(c) H₂SO₄ (d) NOTA
3. Sympathetic nerve fibres innervate the wall of the
(a) arteries (b) pancreas
(c) veins (d) both (a) and (c)
4. White blood corpuscles are ————— cells.
(a) non-nucleated (b) nucleated
(c) both (a) and (b) (d) NOTA
5. Alveoli provide the surface for
(a) absorption of water
(b) gaseous exchange
(c) excretion
(d) NOTA
6. Kidneys are surrounded by
(a) adipose tissue (b) epithelial cells
(c) connective tissue (d) muscle cells
7. Neurotransmitters are
(a) acetylcholine (b) serotonin
(c) GABA (d) all the above

8. Energy for muscle action is provided by _____ molecules.
- (a) ADP (b) ATP
(c) GTP (d) all the above
9. Hyposecretion of growth hormone in children results in
- (a) gigantism
(b) dwarfism
(c) both (a) and (b)
(d) normal growth
10. Glycogenolysis in the liver is activated by
- (a) TSH (b) FSH
(c) glucagon (d) LH

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is balanced diet? Explain its constituents.
- Or
- (b) List out the enzymes of pancreas and their role in digestion of protein.

12. (a) Write a note on composition of human blood.

Or

- (b) Explain the structure and function of coronary artery.

13. (a) Give an account on structure and function of red corpuscle.

Or

- (b) Write about the ultra structure of nephron in man.

14. (a) Briefly explain various neurotransmitters of the central nervous system.

Or

- (b) Explain the photo-chemistry of vision in man.

15. (a) Write a note on the structure of human ovary.

Or

- (b) Explain the structural aspects of human testis.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)

Each answer should not exceed 600 words.

16. (a) Discuss about the importance of vitamins and minerals with regard to human health.

Or

- (b) Write notes on

- (i) Intestinal villus
- (ii) Absorption of lipids

17. (a) Discuss in detail about the blood groups in man.

Or

- (b) Explain the rate of heartbeat and blood pressure in humans with a reference to sex.

18. (a) Explain in detail about the transport of carbon-dioxide in man.

Or

- (b) Write notes on

- (i) Micturition.
- (ii) Dialysis.

19. (a) Discuss about the molecular mechanisms responsible for the conduction of nerve impulses in man.

Or

- (b) Describe the Sliding-filament hypothesis.

20. (a) What is diabetes mellitus? Describe the physiological effects of insulin and its structure.

Or

- (b) Give a detailed account on neuroendocrine regulation of reproduction.
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