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3 (Sem-3/CBCS) ZOO HC 2

2021

(Held in 2022)

ZOOLOGY

(Honours)

Paper : ZOO-HC-3026

**(Animal Physiology : Controlling and
Coordinating Systems)**

Full Marks : 60

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

1. Fill in the blanks : 1×7=7

- (a) The loss of positive ions from the interior of a neuron produces _____.
- (b) An example of supportive connective tissue is _____.

Contd.

- (c) _____ hormone controls Na^+ and K^+ metabolism in the body.
- (d) Deficiency of vasopressin causes _____ disease.
- (e) Node of Ranvier is present in _____.
- (f) The epithelial tissue present on the inner surface of bronchioles and fallopian tube is _____.
- (g) Cortisol is a _____ hormone.

2. Answer the following questions : **(any four)**
2×4=8

- (a) Why is simple squamous epithelium called pavement epithelium ? 2
- (b) Name different hormones produced by ovary with their functions. 2
- (c) What is sarcoplasm ? Mention its function. 1+1=2
- (d) What is erythropoiesis ? Which hormone stimulates it ? 1+1=2
- (e) What do you mean by transmission of nerve impulse ? 2

3. Answer the following questions : **(any three)**
5×3=15

- (a) Describe the structure and functions of striated muscle.
- (b) Write a short note on endocrine function of posterior pituitary.
- (c) Describe the methods of contraception in female.
- (d) Gonads are also endocrine organs. Justify this statement.
- (e) Give an account on histological structure and secretion of testis with suitable diagram.

4. Answer **any three** of the following questions :
10×3=30

- (a) Define epithelial tissue. Describe the classification of epithelial tissues with suitable diagram. 2+8=10
- (b) Explain the molecular mechanism of amine hormone action with suitable example. 10

(c) Describe different components of blood with their functions. How does blood differ from lymph ? $8+2=10$

(d) Define muscle twitch. Describe molecular and chemical basis of striated muscle contraction with suitable diagram. $2+8=10$

(e) Give an account on histological structure and secretion of pancreas.

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