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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.



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(c) \_\_\_\_\_ hormone controls  $\text{Na}^+$  and  $\text{K}^+$  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.  $10$

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