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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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