



# UNIVERSITY OF THE PUNJAB

Fifth Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig. ....

Roll No. in Words. ....

**PAPER: Animal Physiology – II**  
**Course Code: ZOOL-305 Part-I (Compulsory)**

**MAX. TIME: 15 Min.**  
**MAX. MARKS: 10**

.....  
Signature of Supdt.:

**Attempt this Paper on this Question Sheet only.**

**Please encircle the correct option. Division of marks is given in front of each question.**

**This Paper will be collected back after expiry of time limit mentioned above.**

**Q.1. Encircle the right answer, cutting and overwriting is not allowed. (1x10=10)**

- i. Which one of the following pair of endocrine glands secrete steroid hormones?
  - a. Thymus and testes
  - b. Adrenal and ovary
  - c. Pancreas and parathyroid
  - d. Adrenal and Parathyroid
- ii. Blood calcium level is lowered by the action of \_\_\_\_\_.
  - a. Thyroxine
  - b. Calcitonin
  - c. Parathormone
  - d. both b and c
- iii. Which one of the following pair is incorrectly matched?
  - a. Glucagon-beta cells (source)
  - b. Insulin-diabetes mellitus (disease)
  - c. Somatostatin-delta cells (source)
  - d. Corpus luteum-relaxin (secretion)
- iv. Which one of the following sets of ions are necessary in the chemical events for muscle contraction?
  - a.  $\text{Na}^+$  and  $\text{K}^{++}$
  - b.  $\text{Ca}^{++}$  and  $\text{Mg}^{++}$
  - c.  $\text{Na}^+$  and  $\text{Ca}^{++}$
  - d.  $\text{Na}^+$  and  $\text{Mg}^{++}$
- v. Fertilizin is a chemical substance produced from the following?
  - a. Mature eggs
  - b. Acrosome
  - c. Polar bodies
  - d. Middle piece of sperm
- vi. Sertoli cells are found in
  - a. Liver
  - b. Seminiferous tubules
  - c. Heart
  - d. Germinal epithelium
- vii. If hydrostatic pressure is used to move a molecule through a membrane, this is termed
  - a. Filtration
  - b. Osmosis
  - c. Active transport
  - d. Endocytosis
- viii. Which one of the following hormones does not need second messenger?
  - a. FSH
  - b. LH
  - c. Glucagon
  - d. Estrogen
- ix. The amount of pressure required to stop osmosis is called \_\_\_\_\_.
  - a. Osmotic pressure
  - b. Pressure difference
  - c. Active transport
  - d. Osmotic balance
- x. The normal polarized state of -90 mV is lost in which stage?
  - a. Repolarization
  - b. Depolarization
  - c. Resting
  - d. Refractory period



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PAPER: Animal Physiology – II

Course Code: ZOOI-305 Part – II

MAX. TIME: 2 Hrs. 45 Min.

MAX. MARKS: 50

**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

**Q.2. Questions with short answers.**

**(10 x 2 = 20)**

- i. Give the functions of male sex hormones?
- ii. Enlist the Hypothalamic releasing and inhibitory hormones?
- iii. Give the role of  $T_3$  and  $T_4$  in Thyroid gland?
- iv. What is Gigantism?
- v. Give location of taste buds on the tongue?
- vi. Give the role of Troponin and Tropomyosin in the mechanism of muscle contraction?
- vii. What is organ of Corti?
- viii. Describe the mechanism of Co-transport?
- ix. What is the role of Voltage gating?
- x. What is the role of Cochlea in transmission of sound?

**Q.3. Questions with brief answers.**

**(3 x 10 = 30)**

1. Write a detailed note on Photochemistry of vision? 10
2. Give in detail biosynthesis of epinephrine in adrenal medulla? 10
3. Give a detailed account of the process of Spermatogenesis along with the role of gonadotropins (FSH & LH) in the testes? 10