

**UG 5th Semester Examination 2021****ZOOLOGY (Honours)****Paper: DC-11****(Histology and Endocrinology)****(CBCS)**

Full Marks: 25

Time: Two Hours

*The figures in the margin indicate full marks.**Candidates are required to give answers with their own words as far as practicable.*

**1. Answer any eight questions:**  $\frac{1}{2} \times 8 = 4$

- a) Parathormone increases the blood calcium level. (True or False)
- b) Which hormone accelerates the conversion of glycogen to glucose?
- c) The most common cell in connective tissue proper is known as \_\_\_\_\_ (Fill in the blank)
- d) Name the contractile element found in skeletal muscle.
- e) \_\_\_\_\_ hormone is responsible for “fight-or-flight” response. (Fill in the blank)
- f) Mention the source of inhibin.
- g) What is the cause of Cushing disease?
- h) State the name of hormone secreted from Zona reticularis.
- i) Thymus gland is responsible for the body's circadian rhythm. (True or False)
- j) \_\_\_\_\_ hormone receptor is present on the surface of plasma membrane. (Protein/Steroid)
- k) Give an example of tyrosine containing hormone.
- l) Write the full form of DHEA.

**2. Answer any two questions:**  $2 \frac{1}{2} \times 2 = 5$

- a) How are cardiac muscle cells similar to and different from skeletal muscle cells?
- b) How the oestrous cycle differs from menstrual cycle?
- c) State the role of Sertoli cells and Leydig cells in spermatogenesis.
- d) Name one enzyme and one radioisotope used in RIA and ELISA. Name a disease caused due to hyperthyroidism.  $(2 + \frac{1}{2} = 2 \frac{1}{2})$

**3. Answer any four questions:**  $4 \times 4 = 16$

- a) What do you know about hypothalamo-hypophysial gonadal axis?
- b) Write the location of Kupffer cell? State the difference between hepatitis B and hepatitis C.  $1 + 3 = 4$
- c) Classify hormone on the basis of chemical structures.
- d) Write the name and endocrine function of different cell types present in pars distalis.
- e) With proper diagram describe the histological features of a typical thyroid follicle. State the role of TSH in thyroid hormone synthesis.  $3 + 1 = 4$
- f) Mention the steps of estradiol biosynthesis with special reference to the enzymes involved in it.
- g) Describe the structure of sarcomere. State the function of oxytocin.  $3 + 1 = 4$