

**B.Sc. 6<sup>th</sup> Semester (Hons.) Examinations, 2020 (CBCS)**

**Subject: Zoology**

**Paper-DSE-T-7: (Endocrinology)**

**Full Marks: 40**

**Time: 2 Hrs**

*Candidates are required to give their answer in their own words as far as practicable*

*Answer any **eight** questions of the following*

**8×5=40**

1. Draw and label a thyroid follicle adding a note on the implication of colloid.
2. Schematically represent the sequential events of a non-steroidal hormone action in a flow chart.
3. How oxytocin and vasopressin reach brain and which behavioral patterns do they control in human?
4. In a flow chart show the endocrine control of menstrual cycle.
5. Draw and represent a cross sectional view of mammalian seminiferous tubule with a short note on testicular feminization.
6. Mention the names of releasing hormones secreted from hypothalamus with their specific function.
7. Write the meaning of pineal. Write morpho-anatomical and histological structure of pineal.
8. Explain with reason(s): Almost absence of Iodine in food causes nodular goiter and hypothyroidism, while excess amount of iodine in food also causes hypothyroidism.
9. Describe in short the endocrine control of glucose homeostasis with long and short negative feedback loop, if any.
10. Excess secretion of STH results in gigantism in children while causes acromegaly in adult human. How?

## Paper-DSE-T-8: (Reproductive Biology)

Full Marks: 40

Time: 2 Hrs

*Candidates are required to give their answer in their own words as far as practicable*

*Answer any **eight** questions of the following*

**8×5=40**

1. Mention the role of any two hormones secreted by the ovary, during gestation.
2. Why and how hCG is utilized in diagnosis of early pregnancy?
3. Discuss the role of hormones in spermatogenesis.
4. Write a short note about steroid hormone receptor.
5. Explain 'azoospermia' and 'retrograde ejaculation'.
6. Define blood-testis barrier and add a note on its functional significance.
7. Elaborate the hormonal regulation of menstrual cycle in human.
8. Briefly describe the major steps of IVF strategy with its merits and demerits.
9. Describe the hormonal role in the mechanism of parturition.
10. Make explanatory notes on any two:
  - a) Functions of accessory male reproductive glands.
  - b) Cumulus oophorous and zona pellucida.
  - c) Modern contraceptive technologies.
  - d) 2-cell theory of steroidogenesis in mammalian ovary.