

B.Sc. 6th Semester (Honours) Examination, 2021 (CBCS)

Subject: Zoology

Paper: DSE-4

(Endocrinology)

Full Marks: 40

Time: 2 Hrs

Candidates are required to give the answers in their own words as far as practicable.

Answer any *eight* questions of the following:

$5 \times 8 = 40$

1. Give a brief account of different phases of estrous cycle.
2. Define parturition? Add a short note on the hormonal regulation of it.
3. Mention the names of secreted hormones from the anterior pituitary with their specific functions.
4. Elucidate briefly histological structure of ovary with diagram.
5. Describe positive and negative feedback mechanisms of hormonal regulation with suitable examples.
6. Write the basic principle of RIA and mention its use in bioassay of hormones.
7. Draw differences between the mechanism of action of steroid and nonsteroid hormones.
8. Which gland is referred as the “third eye”? Why it is called so? – Explain with suitable reasons.
9. Give a brief account of structure and function of hypothalamus.
10. Write causes and symptoms of the following diseases :
 - a) Graves Disease
 - b) Cushing’s Syndrome

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(Reproductive Biology)

Full Marks: 40

Time: 2 Hrs

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Answer any eight questions of the following: **5×8=40**

1. Describe the ‘pap smear test’ and mention its significance in reproductive health.
 2. What are the physiological and hormonal changes related to menopause?
 3. Describe the process of fertilization with reference to acrosome reaction and polyspermy prevention.
 4. Write short notes on the following :
 - a) *In vitro* fertilization
 - b) Ectopic pregnancy
 5. Give a brief account of the hormonal regulation of parturition.
 6. Explain schematically the hypothalamo-hypophyseal gonadal axis with a note on the implication of the said portal system.
 7. Draw and label the neat cross sectional view of a mammalian seminiferous tubule.
 8. Elaborate the basic steps of IVF. Add a brief note on its demerits.
 9. Discuss in brief the events of development and degradation of corpus luteum.
 10. Schematically represent the sequential events of glycoprotein hormone action.
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