B.Sc. 6th Semester (Honours) Examination, 2023 (CBCS)

Subject : Zoology

Course : DSE-4 (OR)

(Reproductive Biology)

Time: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.

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

Group–A

1. Answer *any five* questions of the following: 2×5=10

   (a) What are teratogens? Give an example.

   (b) Name two steroid and two glycoprotein hormones.

   (c) What is 'cumulus oophorus'?

   (d) How is Graves disease different from simple goitre?

   (e) Write down the general composition of birth control pill.

   (f) What is 'pap smear test'?

   (g) Name the hormones secreted by 'zona fasciculata' and 'zona reticularis'.

   (h) What would happen–
       (i) if two sperms fertilize the same egg cell?
       (ii) if two sperms fertilize two egg cells?

Group–B

2. Answer *any two* questions of the following: 5×2=10

   (a) Which accessory structures contribute to the composition of semen? What are the functions of each structure?   2+3

   (b) Give a schematic representation of control of male reproductive function by hormones from the hypothalamus, anterior lobe of the pituitary gland, and the testes.   5

   (c) Mention the name of precursor for all steroid hormones in human. What event in the uterine cycle occurs when the levels of oestrogens and progesterone decrease?   1+4

   (d) Define menopause. What are the physiological and hormonal changes that accompany this event?   1+4

Group–C

3. Answer *any two* questions of the following:

   10×2=20

   (a) Describe the process of fertilization with reference to:

      (i) acrosome reaction

      (ii) block to polyspermy

      5+5

   (b) Explain with labelled diagram, the mechanism of action of an amino acid derived hormone.

      7+3

   (c) Write short notes on:

      (i) *in vitro* fertilization

      (ii) functions of LH and FSH in males and females

      2½+2½

   (d) What is parturition? Give a brief description of hormonal regulation of parturition.

      2+8

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