UG 3rd Semester Examination 2021
ZOOLOGY (Honours)
Paper Code : DC-7-T
(Developmental Biology and Reproductive Biology)

(CBCS)

Full Marks: 25   Time: Two Hours

(The figures in the margin indicate full marks)

1. Answer any eight questions from the following: ½ ×8=4

     a) Wolffian duct is degenerated in female embryo (True/False).

     b) _____ egg shows radial cleavage (Fill in the blank).

     c) Humans have_____ type of placenta (Fill in the blank).

     d) _____ acts as an organizer (Fill in the blank).

     e) Glycoprotein hormones act via a G-protein coupled receptor (True/False).

     f) To dissolve egg coverings sperm produces _____ enzyme (Fill in the blank).

     g) Eggs of mammals are of _____ type (Fill in the blank).

     h) A solid ball of cells produced in cleavage is called _____ (Fill in the blank).

     i) Testosterone, the male sex hormone, is synthesized in the _____ (Fill in the blank).

     j) Write the name of one hormone secreted from ovary.

     k) Write one example of teratogen.

     l) Which part of sperm provides energy for its movement?

2. Answer any two questions from the following: 2½ ×2=5

     a) Write a short note on embryonic stem cell.

     b) What do you mean by hypothalamo-hypophysial-gonadal axis?

     c) Write a short note on modern contraceptive technology.

     d) Classify eggs with examples on the basis of distribution of yolk.

3. Answer any four questions from the following: 4×4=16

     a) What is fate map? Draw and explain the fate map of frog.

     b) Discuss acrosomal reaction with proper diagram.

     c) What do you mean by regeneration? Write about the different types of regeneration with examples.

     d) Discuss the process of hormonal regulation of oogenesis.

     e) Describe the metamorphosis of spermatid into spermatozoa with suitable diagrams.

     f) Briefly describe different types of extra-embryonic membranes of chick.

     g) What is embryo transfer? Mention different steps involved in "*in vitro* fertilization".