

FIVE YEAR INTEGRATED M.Sc., EXAMINATION 2022
SEMESTER - V
Paper LS-3-5-5
Developmental Biology

Time: Three Hours

Full Marks: 40

Questions are of value as indicated in the margin.
Answer **Question No.01** and **any three** from the rest.

1. Write short notes on **any ten** of the following: 10 x 1 = 10
 - a. Genomic equivalence
 - b. Cell lineages
 - c. Induction
 - d. Competence of tissue
 - e. capacitation of sperm
 - f. Stem cell
 - g. Bicoid and nanos
 - h. Epiboly and emboly
 - i. Involution
 - j. Cleavage
 - k. Fate map
 - l. Specification
2.
 - a. What are the differences between spermatogenesis and oogenesis? (5)
 - b. Describe the process of spermateleosis/Spermeiogenesis. (5)
3.
 - a. Describe the process of slow block of polyspermy during fertilization. (5)
 - b. What are the different types of regeneration of tissues? (5)
4. a. How embryonic dorso-ventral axis and antero-posterior axis is determined in Drosophila. (5+5=10)
5.
 - a. What do you mean by double fertilization? What is its significance to the plant? (2.5+2.5=5)
 - b. Describe the process of double fertilization with illustration. (5)