



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 6th Semester Examination, 2022

ZOOACOR13T-ZOOLOGY (CC13)

DEVELOPMENTAL BIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

1. Answer any **eight** questions from the following: 2×8 = 16
 - (a) Differentiate between holoblastic and meroblastic cleavage.
 - (b) State the function of Resact.
 - (c) What is the effect of Thalidomide on the embryo?
 - (d) What are radial and spiral cleavage? Give examples.
 - (e) What do you mean by Primary Organizer?
 - (f) What is Acrosome reaction?
 - (g) How epiblast and hypoblast are formed in avian gastrulation?
 - (h) What is Trophoblast?
 - (i) Why amniocentesis is done during pregnancy?
 - (j) What do you mean by haemo-chorial and endothelio-chorial placenta?
 - (k) What is the function of Zona Pellucida?
 - (l) What is Mid Blastula Transition (MBT)?

2. Answer any **three** questions from the following: 3×3 = 9
 - (a) What is the fast block of Polyspermy? Explain.
 - (b) What do you mean by fertilization cone? How is it formed?
 - (c) State the prerequisite of IVF.
 - (d) Write short notes on: (any **one**)
 - (i) Cortical reaction
 - (ii) Capacitation
 - (iii) Egg-Sperm recognition.
 - (e) Classify placenta on the basis of maternal and fetal attachment.

3. Answer any **three** questions from the following: 5×3 = 15
- (a) Differentiate between Spermatogenesis and Oogenesis.
 - (b) Briefly describe the steps of neurulation and formation of brain with suitable diagram.
 - (c) Briefly describe an experiment showing inducing power of early and late gastrula in newt embryo.
 - (d) Describe spermiogenesis. What are the functions of Sertoli Cells? 2+3
 - (e) Briefly describe (with suitable diagram) the process of primitive streak formation in chick.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

———x———