



‘সমানো মন্ত্র: সমিতি: সমানী’

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 6th Semester Examination, 2023

CC13-ZOOLOGY

DEVELOPMENTAL BIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** of the following: 1×5 = 5
 - (a) What is antrum?
 - (b) What is teratogen?
 - (c) Which major structure is developed from the telencephalon?
 - (d) State Sach’s law.
 - (e) What is zona pellucida?
 - (f) Define centrolecithal egg. Give example.
 - (g) What is discoidal cleavage?
 - (h) What is splanchnopleure?

2. Answer any **three** of the following: 5×3 = 15
 - (a) Describe briefly the formation of yolk sac and allantois in chick.
 - (b) Describe the structure of Graafian follicle with suitable diagram.
 - (c) Write a short note on the various patterns of cleavage.
 - (d) Discuss briefly about the formation and importance of grey crescent.
 - (e) Discuss the physiological process involved in regeneration. 5

3. Answer any **two** of the following: 10×2 = 20
 - (a) Describe Spemann and Mangold’s experiments to prove the existence of the ‘organiser’. Why is the dorsal lip known as the ‘organiser’? Why two different species of *Triturus* were used for the experiments? 6+2+2
 - (b) With suitable diagram, describe the structure of human placenta. State the functions of placenta. 7+3
 - (c) Describe the formation of optic cup and lens of the eye. Draw and describe the histological structure of retina. 7+3
 - (d) Describe the process of gastrulation in chick embryo with suitable diagram(s). How does gastrulation process in chick differ from that of frog? 7+3

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