

U.G. 6th Semester Examination - 2021**ZOOLOGY****Course Code : BZOCCHC601****Course Title : Developmental Biology**

Full Marks : 30

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **ten** the following questions: $1 \times 10 = 10$

- a) Define embryonic induction.
- b) Which is the first extra embryonic membrane to appear in chick?
- c) State the role of noggin in embryogenesis.
- d) What is polarity of egg?
- e) What is compaction?
- f) What is ectopic implantation?
- g) Write the role of LH hormone in oogenesis.
- h) What is resact?

- i) What do you mean by discoblastula?
- j) Define regeneration.
- k) What is corpus luteum?
- l) Define meroblastic cleavage.
- m) What is 'Nieuwkoop center'?
- n) What is 'Gray crescent' area?
- o) What is 'zona pellucida'?

2. Answer any **five** of the following questions: $2 \times 5 = 10$

- a) Distinguish between totipotent and pluripotent stem cells.
- b) Differentiate between GIFT and ZIFT.
- c) State the role of Pax6 as competence factor in eye development.
- d) What is amniocentesis? Mention its significance.
- e) Write short note on spermiogenesis.
- f) Write down the hormonal control of menstrual cycle.
- g) Define capacitation of sperm and mention its significance.

h) Write a short note on block of polyspermy with diagram.

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

5×2=10

a) Classify eggs depending on the amount of yolk present in them. What is vitellogenesis? 3+2

b) Describe the process of development of brain in chick up to the three vesicle stage with proper diagrams. 5

c) Briefly describe the IVF process and its significance. 4+1
