



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES**

**B.Sc. in Applied Sciences
Third Year - Semester II Examination – July 2020**

ZOO 3204 - EMBRYOLOGY AND DEVELOPMENTAL BIOLOGY

Time: Two (02) hours

Answer any FOUR (04) questions.

1. a) What is embryonic cleavage and state the **two (02)** major parameters which determine the pattern of embryonic cleavage. **(25 marks)**
b) Discuss the different patterns of embryonic cleavage. **(75 marks)**
2. a) Explain briefly why sea urchin is used as a model organism in developmental biology. **(20 marks)**
b) Describe the cell fate map in the sea urchin embryo. **(80 marks)**
3. a) What is meant by the term gastrulation? **(10 marks)**
b) Describe the process of gastrulation using *Xenopus laevis* as an example. **(90 marks)**
4. a) Explain the formation of the primitive streak in an avian embryo. **(70 marks)**
b) Discuss the importance of the primitive streak in the avian embryo. **(30 marks)**
5. a) Describe briefly genetic control in embryonic development of animals. **(60 marks)**
b) Explain the genetic basis of cancer in humans. **(40 marks)**

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