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School of Basic Sciences
Bachelor of Science Honours in Chemistry
Mid Term Examination - Mar 2024

Duration : 90 Minutes
Max Marks : 50

Sem VI - P1UE601T - Evolutionary and Developmental Biology

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Discuss the three germ layers formed during gastrulation? K2 (2)
- 2) Explain how did Darwin's theory of natural selection revolutionize our understanding of species diversity? K1 (3)
- 3) Discuss how molecular evidence, such as DNA sequences, support the theory of evolution? K2 (4)
- 4) Analyze the role of homeotic genes in development? K2 (6)
- 5) Explain the concept of gastrulation and fate maps, elucidating their pivotal roles in establishing body axes and tissue differentiation. K3 (6)
- 6) Assess the Hardy-Weinberg law of equilibrium. What are the assumptions made by this principle, and what conditions can disrupt this equilibrium within a population? K3 (9)
- 7) Define speciation and explain the various modes of speciation. K4 (8)
- 8) Discuss palaeontology, and how does the fossil record provide evidence for evolution? K4 (12)

OR

Describe the process of organogenesis and give examples of organs formed during the late embryonic stage. K4 (12)