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PG CBCS
M.SC. Semester-IV Examination, 2021
ZOOLOGY
PAPER: ZOO 402

Full Marks: 40**Time: 2 Hours**

Write the answer for each unit in separate sheet

The figures in the right-hand margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable.

Group-402.1

(Marks: 20)

(DEVELOPMENTAL BIOLOGY)

Answer TWO questions of the following:

2X10=20

1. Name major sperm binding glycoproteins in mouse Zona pellucida and elucidate their functions. 10
2. Discuss the model (with suitable diagram) of the mechanism by which the disheveled protein stabilizes Beta -catenin in the dorsal portion of the amphibian egg. 10
3. Illustrate the roles of inositol phosphates (IP₃) in releasing calcium from the endoplasmic reticulum and the initiation of development in sea urchin egg. 10
4. a. Briefly describe the functions of Chordin and Noggin. (2.5+2.5)+5
 b. Hydra hypostome is an organizer – explain.

Group-402.2

(Marks: 20)

(NEUROENDOCRINOLOGY)

Answer TWO questions of the following:

2X10=20

1. What are neurosecretory cells? Name two neurohormons. What is the difference between autocrine and paracrine communication system? Write down the cause and symptoms of Huntington's disease. 3+2+5

(P.T.O.)

(2)

2. a. Describe the ionic and membrane changes occurring in an axon during signal propagation.
b. Write a short note on hypothalamic control of thyroid secretion. 5+5
3. Write down the cause and symptoms of Alzheimer's disease. What are pheromones? What are the functions of Hypothalamus? 5+2+3
4. What are neurotransmitters? Give two examples. What is the difference between endocrine and neuroendocrine system? What is Systemic Lupus Erythematosus? 3+3+4
