U.G. 2nd Semester Examination - 2022
ZOOLOGY
[PROGRAMME]
Course Code : ZOOL-G-CC-T-02
(Comparative Anatomy, Developmental Biology of
Vertebrates and Ecology)

Full Marks : 40   Time : $2\frac{1}{2}$ 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 **five** questions of the following:

                                   $2\times5=10$

    a) What is Foramen of Paniza?

    b) What do you mean by autostylic type of jaw suspension? Give one example.

    c) Mention the function of liver in the digestion of food material.

    d) What is glomerulus? Mention one function of it.

    e) Define Oogenesis.

    f) What do you mean by Autoecology?

    g) Define the term 'population'.

[Turn over]

    h) Distinguish between In-situ and Ex-situ type of conservation.

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

                                   $5\times2=10$

    a) What is food chain? What do you mean by food web? Give one example of food chain.

                                   $2+2+1=5$

    b) Write down three management strategies for tiger conservation. What do you mean by pyramid of number? $3+2=5$

    c) What is regeneration? What is epimorphosis type of regeneration? Give one example of epimorphosis type of regeneration.

                                   $2+2+1=5$

    d) Describe the modifications of aortic arches in birds with labelled diagram. What is acrodont type of dentition? $(2+2)+1=5$

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

                                   $10\times2=20$

    a) What is ecological succession? Describe energy flow through ecosystem by single channel Energy Flow Model. Explain the J-shaped growth form of a population. Write the difference between Natality and Mortality of a population. $2+3+3+2=10$

b) What do you mean by spermiogenesis? Describe the process of formation of acrosome during spermiogenesis with suitable labelled diagram. What is holoblastic cleavage? Give one example.

$$2+(4+2)+(1+1)=10$$

c) Describe with suitable labelled diagram the structure of mammalian heart. What is fossa ovalis? Define the term Metanephros and mention where it is found.

$$(4+2)+2+(1+1)=10$$

d) What is fertilization? Describe the process of fertilization in the light of acrosome reaction and cortical reaction. What is fertilizin? What is polyspermy? Mention one method to block polyspermy. $2+(2\frac{1}{2}+2\frac{1}{2})+1+1+1=10$

————————