3 SEM TDC ZOO M 1 (N/O)

Zoo — 301, 303

2019 Phy — 301, 302

(November Bot — 301, 303

Chem — 301, 303

ZOOLOGY Geo — 301, 303

(Major) Math — 301, 302

Course : 301 Stat — 301, 302

Arity — G

The figures in the margin indicate full marks
for the questions

(New Course)

(Chordate Diversity and Comparative Anatomy)

Full Marks : 48

Pass Marks : 14

Time : 2 hours

1. Fill in the blanks :   1×5=5

    (a) Ammocoete larva belongs to the class
    _____ .

    (b) Herdmania belongs to the subphylum
    _____ .

    (c) Pineal eye is an anatomical peculiarity
    of _____ .

    (d) Dental formula of human teeth is _____ .

    (e) _____ covers the gills in Osteichthyes.

2. Write short notes on any *two* of the
    following :   4½×2=9

    (a) Neoteny in Amphibia

(*Turn Over*)

(b) Swim bladders of fish

(c) Adaptation of aquatic mammals

(d) Poisonous snakes of India

3. Write the general characters of Hemichordata. Describe the affinities of Hemichordata with Invertebrates.   5+3=8

Or

Write the general characters of Chordata and classify Chordata up to class with examples.   8

4. What is parental care? Explain the different types of parental care found in Amphibians.

2+6=8

Or

Describe the 'biting mechanisms of poisonous snakes'.

8

5. Explain the adaptations involved in flight mechanism in Birds.

9

Or

Classify Mammalia up to orders with at least two characters each with examples.

9

6. Give a comparitive account of the alimentary system in Reptiles and Birds.

9

Or

Give a comparative account of the integumentary systems of fish and mammals.

9

(Old Course)

(Biochemistry)

Full Marks : 48

Pass Marks : 19

Time : 2 hours

1. *(a)* Fill in the blanks with appropriate words :   1×5=5

   (i) The energy available to do a work is _____ energy.

   (ii) The chemical bond between two amino acids in a protein is _____ bond.

   (iii) Glycolysis occurs in _____ of a cell.

   (iv) IUB stands for _____ .

   (v) Deficiency of Vitamin C causes _____ .

   (b) Distinguish between the following (any *three*) :   3×3=9

   (i) pH and Buffer

   (ii) Water-soluble vitamin and fat-soluble vitamin

   (iii) Glycolysis and Krebs' cycle

   (iv) Nucleotide and Nucleoside

(Turn Over)

2. Describe the first law of thermodynamics and its application in biosystems.   3+8=11

Or

Explain the mechanism of Krebs' cycle in respiration.   11

3. Define 'Enzyme'. What is enzyme inhibition? Describe the mechanism of enzyme action.   2+3+6=11

Or

Describe the different water-soluble vitamins with their sources and functions.   11

4. Write short notes on the following (any *three*) :   4×3=12

(a) Water

(b) Coenzymes

(c) Watson and Crick model of DNA

(d) ATP

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