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3 SEM TDC ZOO M 1 (N/O)

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(November)

ZOOLOGY

(Major)

Course : 301

*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) Tornaria larva is the larva of _____.
- (b) The _____ is an example of the order Cetacea of class Mammalia.
- (c) The reptile _____ is known as living fossil.
- (d) Preen gland is found in _____.
- (e) Among fish, reptile and mammal, the thickest integument is found in _____.

2. Write short notes on any *two* of the following : 4×2=8

- (a) Importance of ammocoete larva in evolution

- (b) Structure of gills in a fish
- (c) Locomotion in fish
- (d) Parental care in fish

3. Classify the chordate up to class citing at least two significant characters of each class. 8

Or

Justify the term 'Hemichordata' and write its affinities to invertebrates. 2+6=8

4. What is neoteny? Prepare a note on metamorphosis in Amphibia. 2+7=9

Or

Write about the poisonous snakes of Assam and at least two identifying characters of poisonous snakes. 7+2=9

5. What type of birds are grouped in superorder Ratite? Discuss the flight adaptation in birds. 1+8=9

Or

In which subclass the egg-laying mammals are grouped in? Discuss the aquatic adaptation of mammals. 1+8=9

6. Compare the alimentary canal of reptile and mammal. 9

Or

Write an account of the integumentary derivatives of mammal. 9

(Old Course)

(**Biochemistry**)

Full Marks : 48

Pass Marks : 19

Time : 2 hours

1. (a) Fill in the blanks with appropriate words : 1×6=6
- (i) The substance that can donate a proton is called _____.
 - (ii) Amino acids are linked together by _____ bond in a polypeptide.
 - (iii) The substance that links the glycolysis and Krebs' cycle is _____.
 - (iv) According to IUB, enzymes are of _____ different classes.
 - (v) Retinol is known as vitamin _____.
 - (vi) Purines are double-ring compound, one benzene ring and the other is _____ ring.
- (b) Distinguish between the following pairs : 3×3=9
- (i) Entropy and Enthalpy
 - (ii) Glycosidic bond and Peptide bond
 - (iii) Nucleotide and Nucleoside

2. How is zwitterion formed? Explain how a buffer solution resists change in pH. 3+8=11

Or

What are high-energy phosphates? Classify lipids with examples. 3+8=11

3. Where does the β -oxidation of fatty acid take place and why? Discuss the process of β -oxidation of fatty acid. 2+9=11

Or

What is ETS? Write about the mechanism of enzyme action. 3+8=11

4. Write short notes on *either* (a) and (b) or (c) and (d) : $5\frac{1}{2}\times 2=11$

(a) Coenzyme

(b) DNA as genetic material

(c) Nitrogenous base

(d) Vitamin K
