

Total No. of Printed Pages—7

**2 SEM TDC ZOO M 1 (N/O)**

**2 0 1 8**

**( May )**

**ZOOLOGY**

**( Major )**

**Course : 201**

**Time : 2 hours**

*The figures in the margin indicate full marks  
for the questions*

**( New Course )**

**( BIOCHEMISTRY )**

Full Marks : 48  
Pass Marks : 14

1. (a) Fill in the blanks : 1×5=5

(i) The most important buffer system  
in blood is \_\_\_\_.

(ii) Krebs' cycle takes place in \_\_\_\_.

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(iii) The calciferol changes to vitamin D on activation by \_\_\_\_\_.

(iv) Xerophthalmia is caused due to the deficiency of vitamin \_\_\_\_\_.

(v) DNA has \_\_\_\_\_ instead of uracil.

(b) Write short notes on the following :  $2 \times 4 = 8$

(i) Redox reaction

(ii) Essential amino acids

(iii) Storage form of fatty acid in plants and animals

(iv) Forms of RNAs

2. Define carbohydrates. Give a brief classification of carbohydrates with example.

$1+6=7$

Or

Why is amino acid called building blocks of protein? Write briefly about the different levels of organization in protein.

$1+6=7$

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( Continued )

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3. Why are enzymes known as bio-catalyst? Give in detail about the IUB classification of enzymes.  $1+6=7$

Or

What is vitamin? Write a brief note on different types of vitamins.  $1+6=7$

4. Explain the different steps of Krebs' cycle. 7

Or

Write the different steps of  $\beta$ -oxidation of fatty acids and the fate of the end-product of  $\beta$ -oxidation. 7

5. Write about the molecular structure of DNA. 7

Or

Prove that DNA is the genetic material. 7

6. What is free energy? Define standard free energy change. Explain how biological reactions are governed by free energy changes.  $1+1+5=7$

( Turn Over )

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Or

Define high energy bound compounds.  
Describe the role of ATP and other high  
energy phosphates as energy carrier. 1+6=7