Total No. of Printed Pages—7

2 SEM TDC ZOO M 1 (N/O)

2018

(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 _____.

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

(iv) Xerophthalamia is caused due to the deficiency of vitamin _____.

(v) DNA has _____ instead of uracil.

(b) Write short notes on the following : 2×4=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

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

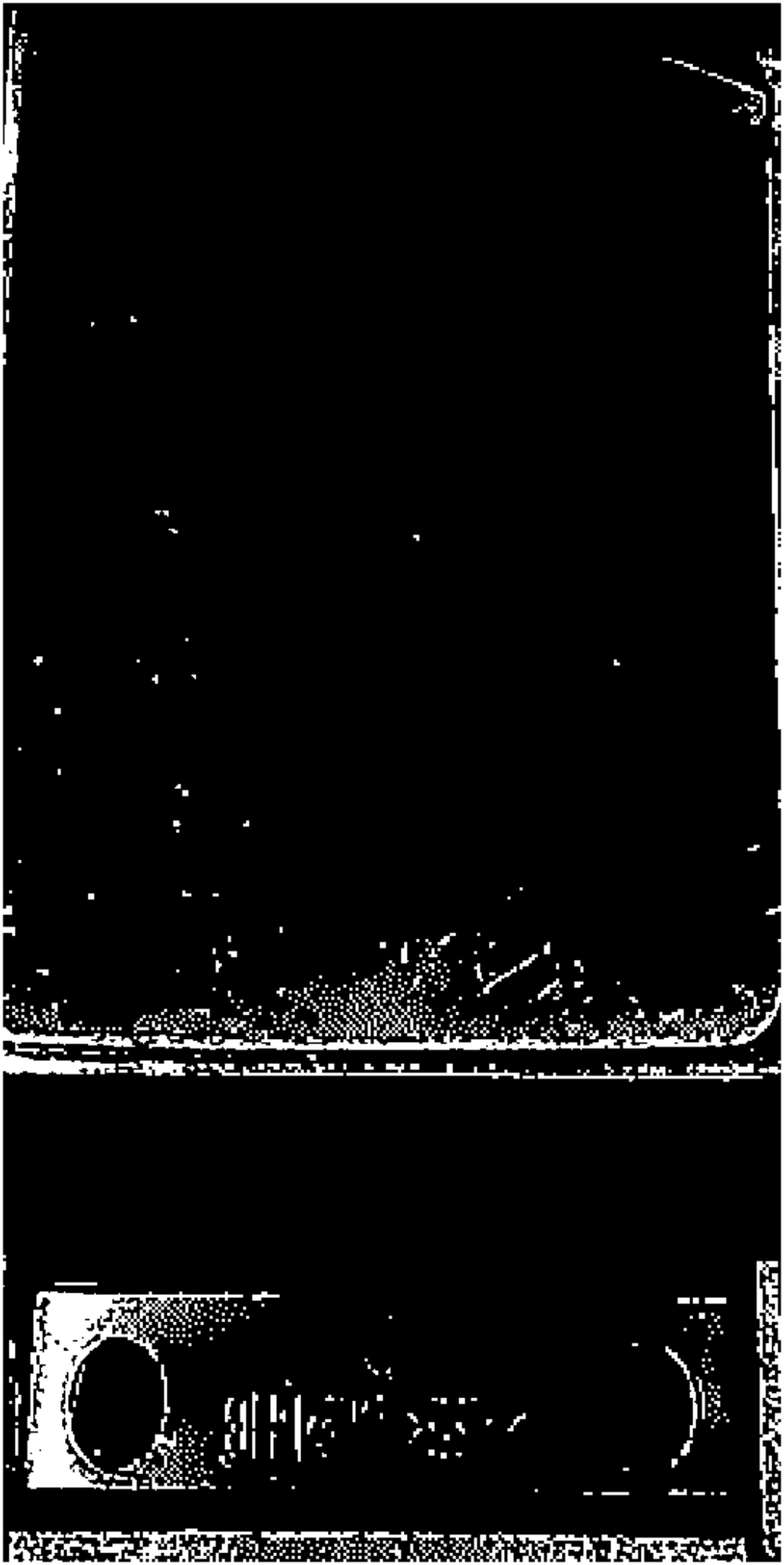
Write the different steps of β-oxidation of fatty acids and the fate of the end-product of β-oxidation. 7

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



Or

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

(Old Course)

(ANIMAL DIVERSITY—II AND COMPARATIVE ANATOMY)

Full Marks : 48
Pass Marks : 19

SECTION—A

[Animal Diversity—II (Chordate)]

(*Marks* : 36)

Answer Question No. **1** and *any* **three** from the rest

1. *(a)* Fill in the blanks : 1×4=4

(i) Petromyzon belongs to the order _____.

(ii) _____ is an example of living fossil.

(iii) Ratitae is the super-order of _____ birds.

(iv) Paedogenesis is a specific character of the class _____.

(b) Write short notes on the following : 4×2=8

(i) Ammocoete larva

(ii) Parental care of Amphibia

2. What is neoteny? Give a brief note on neoteny in amphibia. 1+7=8

3. Write about the development of larval forms of chordates and their significance in chordate phylogeny. 8

4. Discuss about the mechanism of flight in birds with suitable diagrams. 6+2=8

5. Write a note on the swim bladder and accessory respiratory organ of fishes. 5+3=8

6. Discuss about the aquatic adaptation in mammals. 8

SECTION—B

(Comparative Anatomy)

(*Marks* : 12)

7. Compare between the pectoral girdle of birds and mammals with diagrams. 5

Or

Compare between the cranial nerves of amphibia and reptiles with diagrams. 5

8. Compare between the structure of heart in reptile and mammals with diagrams. 7

Or

Compare between the female genital system of reptiles and birds with diagrams. 7

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