11. 1st you write the structure of purines and pyrimidines of nucleic acid then explain double helical structure of DNA.

12. Write a note about adrenal hormone and justify your views whether these comes under primary or secondary metabolites category.

13. What do you understand by β-oxidation. Explain in detail with its biochemical importance.

(Printed Pages 4)

(20518) Roll No.....

M.Sc. (Bio-Tech.) - II Sem.

NP-3334

M.Sc.(Bio-Technology) Examination, May 2018

FUNDAMENTAL OF BIO CHEMISTRY

(H-201)

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt **all** the questions as per instructions.

Section - A

(Very Short Answer Questions)

Note : Attempt all **five** questions. Each question carries 2 marks. Very short answer is required, not exceeding 75 words.

1. Write the structure of any trisaccharide and name the bonds in between monomers.

P.T.O.

2. Write the structure of "CAMEL" and calculate the charge on it at pH 7.
3. Make structure of G≡C complex, showing hydrogen bonds in proper manner.
4. Write structure of xanthine, hypoxanthine and uric acid. Also name them by IUPAC pattern.
5. Write structure of FADH.

Section - B

(Short Answer Questions)

Note : Attempt any **two** questions out of the following 3 questions. Each question carries 05 marks. Short answer is required, not exceeding 200 words.

6. What is the relation in between co-enzyme and second substrate? Explain with appropriate example.

7. Justify with appropriate example that glycosidic bonds are not ester bonds.
8. In nucleic acid polymerization, chain elongation proceeds from 5' to 3', because 5' hydroxyl group is phosphorylated 1st in comparison of other hydroxyl group of pentose sugar. Why is it so? Explain.

Section - C

(Detailed Answer Questions)

Note : Attempt any **three** questions out of the following 5 questions. Each question carries 10 marks. Answer is required in detail.

9. Discuss aerobic and anaerobic junction of metabolic pathway in reference of PDH and LDH mechanism.
10. Write various method of protein sequencing.

13. How is glucose metabolized by the RBCs for producing energy? Indicate the energy yield for 1 molecule of glucose in the RBCs.

N

(20517) Roll No. 16935202

M. Sc. (Biotech.)-II Sem.

NP-3334

M. Sc. (Biotechnology) Examination, May 2017

Fundamental of Biochemistry

[H-201(M. Sc.-Biotech.)]

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all the *five* questions. Each question carries 2 marks. Very short answer is required.

2×5=10

1. What is heat coagulation?

2. What is the significance of K_m value?

3. What are mucopolysaccharides?

4. Which fatty acids are common in human fat?

5. Name the hormones that bind to intracellular receptors.

Section-B

(Short Answer Questions)

Attempt any *two* questions. Each question carries 5 marks. Short answer is required. 5×2=10

6. With suitable examples, explain the specificity of enzymes.

7. How are purine nucleotides degraded? Add a note on abnormalities due to excessive purine catabolism.

8. Describe the sources, biochemical functions, normal requirement and deficiency manifestations of thiamine.

Section-C

(Detailed Answer Questions)

Attempt any *three* questions. Each question carries 10 marks. Answer is required in detail. 10×3=30

9. Define oxidative phosphorylation. Explain the chemiosmotic theory.

10. Describe the denovo synthesis of fatty acids. What is the coenzyme required and how is it generated?

11. What are isoenzymes? Give examples. What are their clinical significances?

12. What are the different techniques used for precipitation of proteins?

V

Roll No. 1583503831

(20516)

M. Sc. (Biotech.)-II Sem.

NP-3334

M. Sc. (Biotechnology) Examination, May 2016

FUNDAMENTAL OF BIOCHEMISTRY

(H-201)

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all the *five* questions of this Section. Each question carries 2 marks. Very short answer is required. $2 \times 5 = 10$

1. Why some proteins are nutritionally poor?

2. What are the factors influencing enzyme reaction?

3. What is the advantage of storing energy as triglycerides in the body.

4. What is the difference between glucokinase and hexokinase?

5. Which amino acid is required for both purine and pyrimidine synthesis?

Section-B

(Short Answer Questions)

This Section contains three questions, attempt any *two* questions. Each question carries 5 marks. Short answer is required. 5×2=10

6. Explain the amphibolic nature of citric acid cycle.

7. What is the end group analysis? What are the reagents used for this purpose?

8. Describe the sources, biochemical functions, requirements and deficiency manifestations of Vitamin C.

Section-C

(Detailed Answer Questions)

This Section contains five questions, atte *three* questions. Each question carries 1 Answer is required in detail. 1

9. Classify amino acids, giving suitable e Enumerate different reactions of amin giving one example for each.

10. Name two common types of se structures. Mention how they are preserv

11. Enumerate the major clases of enzymes one example for each.

12. What is cAMP? What is its metabolic imp

13. Discuss metabolic alternations in starvatic