PAPER CODE: BIO-1B

CH.S.D.ST. THERESA'S AUTONOMOUS COLLEGE FOR WOMEN: ELURU.
I B.Sc. – II SEMESTER END EXAMINATION – MARCH 2016
BIOCHEMISTRY PAPER I
NUCLEIC ACIDS AND BIOCHEMICAL TECHNIQUES

Time: 3 hrs.   Max.Marks: 50

I   Answer any TWO of the following essays: 2x10=20

1.   Define Nucleoside and Nucleotide. Explain in detail about Double helical
       structure of DNA.
2.   What are porphyrins give an account of heme and chlorophyll.
3.   Explain in detail about SDS-PAGE and its applications.
4.   Define Beer-Lambert's law. Write the instrumentation of
       spectrophotometer.

II   Answer any TWO of the following short essays: 2x5=10

5.   Draw the structure of t-RNA and explain it.
6.   Give an account of Differential centrifugation.
7.   Write the applications of U.V & Visible spectrophotometer.
8.   Define Radio isotopes and write the uses of radio active isotopes in biology.

III   Answer any FOUR of the following: 4x2½ =10

9.   Explain effect of Nucleases on DNA
10.   Write a brief account on denaturation of DNA.
11.   Give an account on Potter-Elvejham Method.
12.   Write the applications of paper chromatography.
13.   Write the principle of Flurimetry.
14.   Write about the units of units of radioactivity.

IV   Answer ALL the following: 10x1=10

15. T_m-Values
16.   Cytochromes
17.   Sonicator
18.   Preparative Centrifugation
19.   Principle of ion-exchange chromatography.

20. Principle of Affinity-chromatography.
21. Molar extinction coefficient.
22. Absorption spectra
23. Half-life
24. β –emitters

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PAPER CODE: BIO-1B
CH.S.D.ST. THERESA'S AUTONOMOUS COLLEGE FOR WOMEN: ELURU.
I B.Sc. – II SEMESTER SUPPLEMENTARY EXAMINATION – MARCH 2016
BIOCHEMISTRY PAPER I
BIO-MOLECULES AND ENZYMOLOGY

Time: 3 hrs.   Max.Marks: 50
SECTION – A
I   Answer any TWO of the following essays: 2x10=20

1.   Explain the chemical reactions of amino acids due to amino groups.
2.   Explain general properties of proteins.
3.   Write a brief note on nomenclature and classification of enzymes.
4.   Write about the enzyme inhibition mechanisms.

SECTION – B
II   Answer any TWO of the following: 2x5=10

5.   Explain michaelis-menten equation for single substrate reaction?
6.   Structure and properties primary structure of protein.
7.   Give a brief account on isoenzymes.
8.   Explain the titration curve of glycine.

SECTION – C
III   Answer any FOUR of the following: 4x2½ =10

9.   Denaturation of protein?
10.   Write about induced-fit model?
11.   Give the out-line of enzyme action-acid base catalysis?
12.   Effect of temperature of enzyme activity?
13.   Draw the structures of aromatic amino acids.
14.   Activation of Zymogen.
SECTION – D
IV   Answer ALL of the following questions.   10x1=10
15.   Active site
16.   Peptide bond
17.   Renatvation of proteins.
18.   Zwitter ion
19.   Haemoglobin structure.
20.   Holo enyme

21. Isomerases
22. Enkephalin
23. Myoglobin
24. Co-enzyme

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PAPER CODE: BIO-2B
CH.S.D.ST. THERESA'S AUTONOMOUS COLLEGE FOR WOMEN: ELURU.
II B.Sc. – IV SEMESTER END EXAMINATION – MARCH 2016
BIOCHEMISTRY PAPER II
INTERMEDIARY METABOLISMS AND BIO CHEMICAL TECHNIQUES

Time: 3 hrs.   Max.Marks: 50

I   Answer any TWO of the following Essays :   2x10=20

1.   Write an essay on Amino acids oxidative methods with examples?
2.   Explain the chemical steps in biosynthesis of purin nucleiotides?
3.   Discuss about the different types of centrifugation methods?
4.   Briefly describe the Applications, principles of spectrophotometer.

II   Answer any TWO of the following short essays: 2x5=10

5.   Write about urea cycle?
6.   Clinical conditions of Gout disease?
7.   Explain indetail about SDS –PAGE?
8.   Describe about the Ion exchange chromatography?

III   Answer any FOUR of the following: 4x2 ½ =10

9.   Biosynthesis of glycine.
10.   Oratic acid urea condition.
11.   Names of Inborn errors of Aminoacid metabolism?
12.   Intruments in Electrophoresis.
13.   Radio Isotopes uses in Biology.
14.   Structures of Nitrogen Bases in nucleiotides.

IV   Answer ALL the following: 10x1=10

15.   Draw the chemical structures of catabolic end products of purin and
         pyrimidin nucleiotides?
16.   Structures of both glucogenic and ketogenic Amino acids?
17.   Define Optical Density?
18.   Alpa rays?
19.   Structures of Pentose sugars?
20.   Define Half life?
21.   Names of Aromatic amino acids?

22.   Principle of electrophoresis
23.   Structure of PRPP.
24.   Fluorimeter.

CH.S.D.ST. THERESA'S AUTONOMOUS COLLEGE FOR WOMEN: ELURU.
II B.Sc. – IV SEMESTER SUPPLEMENTARY EXAMINATION – MARCH 2016

BIOCHEMISTRY
INTERMEDIARY METABOLISM

Time: 3 hrs.   Max.Marks: 50

SECTION - A

I   Answer any TWO of the following Essays: 2x10=20

1.   Define Glycolysis and explain the glycolytic pathway with Energtics?
2.   Write the catabolism of fatty acid through   β -Oridation?
3.   Explain a brief account on General reactions of amino acid.
4.   Define Nucleotides and explain the Biosynthesis of purine metabolism.

SECTION - B

II   Answer any TWO of the following short essays: 2x5=10
5.   Give a Brief account of urea cycle.
6.   Give a Brief account of Heme degradation.
7.   Define Ketone bodies and explain the Ketogenesis pathway.
8.   Explain the Biosynthetic pathway for Tyrosine.

SECTION - C

III   Answer any FOUR of the following: 4x2 ½ =10
9.   Significances of HMP Shunt
10.   Concept of metabolism.
11.   Define glycogenic and ketogenic amino acids with examples.
12.   Structure heme and few points regarding the structure.
13.   Explain the role of ribonucleotide reducatase.
14.   Give a short on Anaplerotic reactions.

SECTION – D

IV   Answer ALL of the following: 10x1=10
15.   Exerganic reaction
16.   Anabolism
17.   Fatty acids – Defenation.
18.   Cholesterol structure – Draw.
19.   Few points regarding glycine
20.   Ketonebodies

21. Nucelic acids
22. P.D.H
23. Kerbs cycle.
24. Define Carbohydrates.

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SUBJECT CODE: BC-3A
CH.S.D.ST. THERESA'S AUTONOMOUS COLLEGE FOR WOMEN: ELURU
III B.Sc. – V SEMESTER END EXAMINATION - OCTOBER 2017
BIOCHEMISTRY PAPER V
PHYSIOLOGY AND NUTRITION

Time: 3 hrs.   Max.Marks: 50

I   Answer any TWO of the following Essays: 2x10=20M

1.   Describe about digestion, absorption and metabolism of Carbohydrates.
2.   Explain about Structure of Heart.
3.   Give a detailed account on Hemoglobin and transport of gases in blood
        (O_2 & CO_2).
4.   Describe in detail about Vitamin A and Vitamin K?

II   Answer any FIVE of the following short notes: 5x4=20M

5.   Describe about Proteins in diet and digestion of Proteins.
6.   Give a detailed account on coagulation of Blood.
7.   Give a brief account on Blood.
8.   Describe about factors controlling Blood Pressure.
9.   Explain about RDA for children, adult, Pregnant and lactating women.
10.   Elucidate on Sources of complete and incomplete Proteins and their
        Biological value.
11.   Describe about Iodine, Zinc and Selenium.

III   Answer ALL the following: 10x1=10M

12.   Define anylolytic and lipolytic Enzymes with Examples.
13.   What is the role of Collagenase and Elastase.
14.   List out any 2 important Functions of Blood?
15.   Define thalassemia.
16.   What is Spike Potential?
17.   Expand SAN and AVN
18.   What is BMR and write any two factors affecting BMR?
19.   What is PEM?
20.   Define neutracenticals and Write examples.
21.   Define Macroelements and Microelements.

SUBJECT CODE: BC-4A
CH.S.D.ST. THERESA'S AUTONOMOUS COLLEGE FOR WOMEN: ELURU
III B.Sc. – V SEMESTER END EXAMINATION - OCTOBER 2017
BIOCHEMISTRY PAPER VI
CLINICAL BIOCHEMISTRY AND ENDOCRINOLOGY

Time: 3 hrs.   Max.Marks: 50

I   Answer any TWO of the following Essays: 2x10=20M

1.   Explain about liver physiology and liver function test.
2.   Role of kidney in maintaining Acid base in electrolyte Balance- Explain?
3.   Describe the mechanism of steroid Hormones with diagram?
4.   Explain in detail about pitutary hormones?

II   Answer any FIVE of the following: 5x4 =20M

5.   Explain indetail about Jaundice?
6.   Write about abnormal constituents of crime?
7.   Give a Briet account of Renal disorders?
8.   Define Diabetes Mellitus and explain about GTT?
9.   Give a short notes on disorders of Carbohydrate metabolism.
10.   Signal transduction pathway?
11.   Give Briet account on Insulin hormone?

III   Answer ALL of the following: 10x1=10M

12.   A/G Ratio
13.   SGOT/SGPT
14.   Structure of kidney?
15.   Tm value
16.   Blood glucose normal value?
17.   G.T.T?
18.   Define Hormones?
19.   Glucocorticoids?
20.   Name steroid hormones?
21.   Oxytocin?

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CH.S.D.ST.THERESA'S AUTONOMOUS COLLEGE FOR WOMEN:ELURU
III B.Sc. – V SEMESTER END EXAMINATION – OCTOBER 2016
BIOCHEMISTRY PAPER III
PHYSIOLOGY & NUTRITION

Time: 3 hrs.   Max.Marks:50

I   Long Answer Questions. Answer any TWO of the following: 2x10=20M

1.   Explain the process of digestion and absorption of Foods.
2.   State the composition of blood, Haemoglobin and transport of gases in blood.
3.   Describe the structure of Muscle and Mechanism of Muscle contraction.
4.   Explain the energy requirements and Recommended dietary allowances for different age groups.

II   Short Answer Questions. Answer any TWO of the following: 2x5=10M

5.   Salivary glands.
6.   Blood coagulation
7.   BmR and factors affecting it.
8.   Vitamin A - sources, deficiency disorders.

III   Short Note questions. Answer any FOUR of the following: 4x2.5=10M

9.   Plasma proteins in health and diseases
10.   Cardiac cycle.
11.   Balanced diet.
12.   Essential fatty, acids.
13.   Vitamin 'C' functions.
14.   Deficiency disorders of vitamin 'D'

IV   Answer ALL of the following: 10x ½ =5M

15.   Bile Juice
16.   Gastrin
17.   Types of Anemia
18.   Blood Pressure
19.   SDA of food.
20.   PEM
21.   Deficiency disorders of Niacin.

22. Vitamin E sources
23. Calcium functions
24. Fluorosis

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PAPER CODE: BC-4A
CH.S.D.ST.THERESA'S AUTONOMOUS COLLEGE FOR WOMEN:ELURU
III B.Sc. – V SEMESTER END EXAMINATION – OCTOBER 2016
BIOCHEMISTRY PAPER IV
CLINICAL BIOCHEMISTRY AND ENDOCRINOLOGY

Time: 3 hrs.   Max.Marks:50

I   Long Answer Questions. Answer any TWO of the following: 2x10=20M

1.   Write an essay on serum enzymes in liver diseases?
2.   Briefly discuss about inborn errors of Amino acids metabolism?
3.   Explain the chemical structures, Biological functions and disorders of
        Thyroid Hormones.
4.   Describe the mechanism of steroid Hormones with diagram?

II   Short Answer Questions. Answer any TWO of the following.   2x5=10M

5.   Write about functions of liver?
6.   Explain about Orotic aciduria?
7.   Write a short note on Gastric family?
8.   Abnormal constituents of urine – Explain?

III   Short note Questions.   4x2½ =10M

9.   Structure and chemistry of Insulin?
10.   Adrenal Hormones?
11.   Glycosuria?
12.   Causes of Hypoglycemia?
13.   Hepatic Jaundice?
14.   Structures of Male sex Hormones?

IV   Answer ALL the following.   10x1=10

15.   Cirrhosis of liver?
16.   Hippuric acid test?
17.   Biological Buffers?
18.   Structure of Kidney?
19.   Nick Manpick disease?
20.   Structure of Cyclic AMP?
21.   Xanthinuria condition?

22. Define Receptor?
23. P^H of HCL in stomach
24. Placenta

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