M.B.PATEL SCIENCE COLLEGE

T.Y B.sc – Biochemistry

Paper BC-301 First Internal - 2011

Date: 17-10-2011 Total Marks : 40

Time: 3 pm to 4.30 pm

Q.1 Explain in detail (Any two) (14)

1. Explain salient feature of prokaryotic genome.
2. Explain salient feature of euk -genome.
3. Explain B form of DNA
4. Tertiary structure of DNA

Q.2 (a) Write short note on (Any two) (6)

1. Okazaki fragment 4. Replication Termination
2. D - loop
3. Topoisomerase

Q.2 (b) Explain in detail (Any one) (7)

1. Elongation of Replication
2. Define Replisome ,primosome and explain telomaric sequence and telomerase

Q.3 (a) Write short note on (Any two) (6)

1. Poly(A) tail formation 4. Promoters
2. Initiation of transcription
3. Splicing mechanism of group II

Q.3 (b) Explain in detail (Any one) (7)

1. Reverse transcriptase
2. Transposons

Best Of Luck

M.B.PATEL SCIENCE COLLEGE
C.E. SOCIETY, ANAND
T.Y.B.SC. ()
1ST INTERNAL EXAM
SUBJECT: BIOCHEMISTRY
BC-302

Date: 18-10-11 Tuesday Time: 3:00 pm to 4:30 pm

QUE. 1

A. Define the following (6)
Co- enzyme, Ribozyme, Enzyme inhibition.
OR
Co-factor, Enzyme, Enzyme activation.

B. Explain in detail: (7)
- Classification of enzyme.

OR
- Significance of E.C. number with examples.

QUE. 2

A. Write short note on: Mg+2 is alkaline earth metal cation for enzyme activation. (3)
OR
Write short note on: biotin is involve as co- enzyme in enzyme catalysed mechanism.

B. Explain in detail on: (6)
- Lysozymes enzyme catalysed action mechanism.

OR
- FADH2 is involved as co- enzyme in enzyme catalysed reactions.

C. Write down the role: (4)
- TPP: thiamine pyro phosphate in catalyse reaction in pyruvate decarboxylase.

OR
- Pyridoxal phosphates in enzyme catalyse reactions.

QUE. 3 attempt any 2 of the following questions (14)

A. Derive M.M. Equation for single substrate reaction.

B. Explain Bisubstare reaction.

C. Give the difference bet competitive and uncompetitive inhibition for the following points.
Definition, changes in Km, L.B. plot, secondary plot.

D. Write factors affecting enzyme activity.

Best of luck.

M.B. Patel Science College,
C.E.SOCIETY,ANAND
First Internal Examination,
T.Y.B.Sc- biochemistry BC-303.
INTRODUCTION TO METABOLISM.

DATE: 19/10/2011
TIME: 3:00P.M TO 4:30P.M TOTAL MARKS: 40

QUE:1(A) Write the answers of the following questions(ANY THREE) 6 MARKS

1. Define glycolysis and write a step of reaction catalyzed by Aldolase Enzyme
2. How alcohol inhibits gluconeogenesis?
3. Explain the hormonal regulation of glycogen synthesis.
4. Explain the Term:PDH Complex
5. Explain in detail: The Cori's cycle
6. Muscles and brain can not produce free glucose why?

QUE: 1(B) Elaborate the following answers(ANY ONE) 7 MARKS

1. Reversible steps of TCA Cycle
2. Breakdown of glucose molecule in the presence of oxygen

QUE: 2(A)Write the answers of the following questions(ANY THREE) 6MARKS

1. Calculate the total number of ATP produced for the long chain Palmitic Acid.
2. How to regulate the fatty acid Biosynthesis?
3. Why the Diabetic people lose their weight?
4. Why should Fat be the fuel Reserve of the body?
5. Explain: Carnitine shuttle Pathway
6. Give the Functions of the following:
   - Lecithin
   - Phosphotidyl inositol

QUE: 2(B)Elaborate the following answers (ANY ONE) 8 MARKS

1. Explain in detail the process ketosis
2. Explain in Detail: Fatty Acid Biosynthesis

QUE: 3(A)Write the answer of the given questions (ANY ONE) 7 MARKS

1. Illustrate the pathway for only ATP Synthesis
2. Explain and Draw Reactions for pyrimidine nucleotide biosythensis

QUE: 3(B)Elaborate the following answers (ANY ONE) 6 MARKS

1. Heme Degradation
2. Purine degradation

ALL THE BEST

M.B. Patel Science College

First Internal Examination

T.Y.B.Sc. Biochemistry. BC-304

Date:-20/10/2011

Time:3:00 p.m to 4:30 p.m **Total Marks: 40**

Q-1 Answer Any Two. **(13)**

1. Give the difference between innate immunity and acquired immunity.
2. Explain classical complement pathway.
3. Write short note on Thymus.
4. Write short notes on IgM.

Q-2 Answer Any One. **(13)**

1. Explain in detail about the application of precipitation.
2. ELISA
3. Application of agglutination.

Q-3 Answer Any Two. **(14)**

1. Write brief notes on various lipoproteins.
2. Explain chemistry of Albumin.
3. Write short notes on
    a. Composition of blood and function of plasma proteins.
    b. Heptoglobin:
4. Functional classification of plasma protein and their function.

BEST LUCK

M.B.PATEL SCIENCE COLLEGE
C.E. SOCIETY, ANAND
T.Y.B.SC.
1ST INTERNAL EXAM
SUBJECT: BIOCHEMISTRY
BC-305

Date: 21-10-11 Friday Time: 3:00 pm to 4:30 pm

QUE. 1

A. Give the answer of the following (any 2). (10)

1. Write notes on phases of respiration..
2. Write notes on metabolic acidosis.
3. Draw the labelled structure of heart.
4. Transportation of O2.

B. Write notes on anyone: (5)

Chloride shift
OR
function of respiration system.

QUE. 2

A. Draw the labelled structure of nephrone and explain in brief improvement of its various parts. (10)

OR

1. Explain in brief about general urinary system. (5)
2. List out various function of kidney. (5)

QUE. 3 write the answer of the following (any 3). (15)

A. Write notes on hormone receptor.
B. Explain classification of hormone.
C. Discuss in detail about mechanism action of steroid hormone.
D. Explain about transport of hormones in blood.
E. Explain about function of hormone.
F. List out various hormones secreted from anterior and posterior part of pituitary gland and write about their importance.

Best of luck.

M.B. Patel Science College

I- Internal Examination

T.Y.B.Sc. biochemistry. BC-306

Industrial microbiology and fermentation technology.

DATE:- 22/10/11 **Total marks:40** **Time:** 3.0 pm to 4.30 pm

Q-1 Answer Any **Two.** **13**

1. Differentiate between features of Prokaryotes and Eukaryotic Organism.
2. Role of antibiotics in cell-wall biosynthesis.
3. Biochemical composition of gram negative cell-wall.
4. Stages in Peptidoglycan Synthesis.

Q-2 Answer Any **Four.** **14**

1. Define and classify screening methods. Explain giant colony method.
2. Explain role of micro-organism in milking and backing industry.
3. List the ranges of fermentation process and explain recombinant and Transformation process.
4. Give brief account on liquid culture method.
5. Explain overlaying of mineral oil in preservation of micro-organism.
6. Discuss on- low temperature storage of micro-organism.
7. Explain Auxanography method for microbial isolation.
8. Write account on Secondary screening and its importance.

Q-3 Answer Any **Two.** **13**

1. Classify Cheese. Draw flow diagram and highlight on Cheddar cheese production.
2. What is Soya bean? Write note on toxicants and its remedy. Discuss preparation Of Miso.
3. Explain- production of Sufu from soya bean.
4. Why yogurt is known as a symbiotic production. Draw a flow diagram and Explain production of yogurt

BEST LUCK