

Library
Sub



Summer-2013 Examination

First BPTH 2012

63113

Biochemistry - III

Total Duration: Section A + B = 2 Hours

Section B Marks: 30

Section-B

- Instruction
- 1) Use **blue/black** ball point pen only.
 - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
 - 3) **All** questions are **compulsory**.
 - 4) The number to the **right** indicates **full** marks.
 - 5) Draw diagrams **wherever** necessary.

Section-B

2. Answer the following (**any five** out of six) :

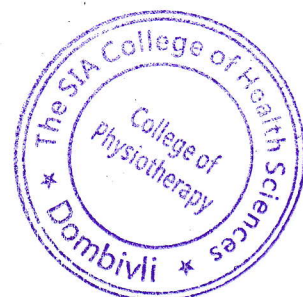
(5x3=15)

- a) Explain with a diagram the effect of temperature on enzyme activity.
- b) Mention the various functions of phospholipids.
- c) Write a note on Kwashiorkor.
- d) Mention the biologically important non-protein products formed from glycine, tyrosine and tryptophan.
- e) Define gluconeogenesis. Mention the various substrates for gluconeogenesis. Explain the importance of gluconeogenesis.
- f) Draw a diagram of the electron transport chain also showing the direction of flow of electrons.

3. Answer the following (**any three** out of four) :

(3x5=15)

- a) Describe the functional classification of proteins giving one example of each class.
- b) Explain the beta oxidation of palmitic acid with its energetics.
- c) Describe the biochemical events in skeletal muscle contraction. Add a note on role of calcium in skeletal/muscle contraction.
- d) Explain the role of vitamin A in vision. Describe the ocular manifestations of vitamin A deficiency.



First B.P.Th. (2012) Examination, Summer 2014
BIOCHEMISTRY – III

Total Duration : Section A + B = 2 Hours

Section B Marks : 30

SECTION – B

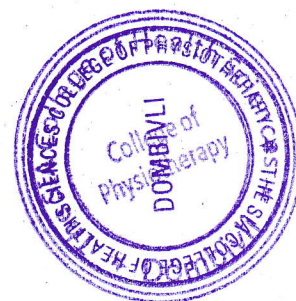
- Instructions :**
- 1) Use **blue/black** ball point pen only.
 - 2) Do not write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
 - 3) **All questions are compulsory**.
 - 4) The number to the **right** indicates **full marks**.
 - 5) Draw diagrams **wherever necessary**.
 - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
 - 7) Use a common answer book for **all Sections**.

SECTION – B

(30 Marks)

2. Answer the following (any five out of six) : (5×3=15)
 - a) Describe the steps involved in urea cycle. 40
 - b) Write a note on essential fatty acids. 15
 - c) Describe the hormonal regulation of blood glucose.
 - d) Describe classification of carbohydrates with one example of each.
 - e) Write a note on competitive inhibition of enzymes.
 - f) Give an account of tyrosine and phenylalanine metabolism.

3. Answer the following (any three out of four) : (3×5=15)
 - a) Give the daily requirements, functions and deficiency manifestations of Vitamin A.
 - b) Describe prostaglandins and their functions.
 - c) Describe any three renal function tests.
 - d) Describe the factors affecting enzyme activity.





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First B.P.Th. (2012) Examination, Summer 2016
BIOCHEMISTRY

Total Duration : 2 Hours

Total Marks : 40

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 - 7) Use a common answer book for **all** Sections.

1. Short answer question (any five out of six) : (5×3=15)
 - a) Classify polysaccharides giving suitable examples.
 - b) Classify lipoproteins, stating their significance.
 - c) Define essential amino acids and state their significance.
 - d) Explain structure of DNA. *Chemical structure of DNA*
 - e) Describe functions, deficiency disorders of iodine.
 - f) State the role of isoenzymes in clinical diagnosis.

2. Short answer question (any five out of six) : (5×5=25)
 - a) Describe the biochemical functions, RDA, deficiency manifestations of Vitamin A.
 - b) Enumerate glycogen storage diseases and their significance.
 - c) Write short answer on ketosis, ketogenesis and ketonuria.
 - d) Explain competitive inhibition of enzyme with examples.
 - e) What are liver function tests ? Explain excretory type of functions.
 - f) Explain location, sources of substrates and regulation of Urea cycle.



First B.P.Th. (2012) Examination, Summer 2017
BIOCHEMISTRY

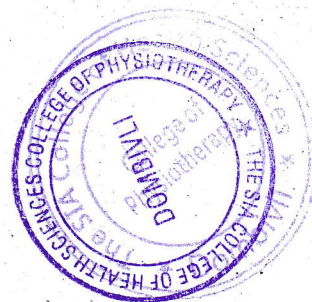
Total Duration : 2 Hours

Total Marks : 40

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 - 7) **Use** a common answerbook for **all** Sections.

1. Short answer question (**any five** out of six) : (5×3=15)
 - a) State the deficiency manifestations of vitamin A.
 - b) What are trace elements ? Give functions of any three.
 - c) Describe different RNAs and their functions.
 - d) Describe digestion and absorption of proteins.
 - e) State biochemical rôle of vitamin C along with the deficiency disorders.
 - f) State functions of cholesterol and its significance.

2. Short answer question (**any five** out of six) : (5×5=25)
 - a) What is ketosis? Discuss the causes and illeffects of it.
 - b) Describe competitive inhibition of the enzymes with suitable examples.
 - c) Define hyperglycaemia and glycosuria. State the causes of them.
 - d) Explain Beta oxidation of palmitic acid and its energetics.
 - e) Describe sources, RDA, biochemical role and deficiency manifestations of calcium.
 - f) What are liver function tests? Describe tests of synthetic function-type.



First B.P.Th. (2012) Examination, Summer 2018
BIOCHEMISTRY

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Total Marks : 40

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 - 4) The number to the **right** indicates **full** marks.
 - 5) Draw diagrams **wherever** necessary.
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 - 7) **Use** a common answerbook for **all** Sections.

1. Short answer question (**any five** out of six) : (5×3=15)
 - a) Name ketone bodies. Elaborate the pathway of ketogenesis.
 - b) Explain factors affecting enzyme action.
 - c) Write a note on specific dynamic action.
 - d) Draw schematic representation of Citric acid cycle.
 - e) Discuss functions of calcium.
 - f) Write short on Gout.

2. Short answer question (**any five** out of six) : (5×5=25)
 - a) Describe mechanisms and biochemical events during muscle contraction.
 - b) Give an account of diagnostic use of enzymes and isoenzymes.
 - c) Define proteins. Classify proteins depending on their functions with suitable examples.
 - d) Classify hormones on basis of their action with suitable examples. Explain role of cAMP as second messenger of hormone action.
 - e) Explain oxidation of palmitic acid along with its energetics.
 - f) Write dietary sources, RDA, biochemical functions and deficiency manifestations of Vitamin B1.



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SECTION - C

(30 Marks)

- 4. a) Draw Well labelled diagram of sarcomere. 3
- b) Describe molecular basis of muscle contraction in detail. 9
- c) Explain the role of ATP in muscle contraction. 3

(1×15=15)

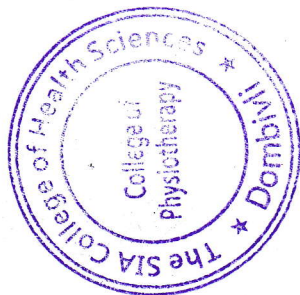
- 5. a) a) Enumerate Ascending Tracts. 3
- b) Describe origin, course and termination of tract carrying pain sensation. 8
- c) Add a note on referred pain. 4

(1×15=15)

OR

- 5. b) a) Define and classify reflex action. 3
- b) Explain difference between monosynaptic reflex and polysynaptic reflex. 5
- c) Describe properties of reflexes. 7

(1×15=15)





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First B.P.Th. (2012) Examination, Winter 2016
BIOCHEMISTRY

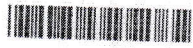
Total Duration : 2 Hours

Total Marks : 40

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 - 7) Use a common answerbook for **all** section.



1. Short answer question (any five out of six) : (5x3=15)
 - a) How are enzymes classified ? Give suitable examples.
 - b) What are the Recommended Dietary Allowance (RDA), biochemical significance and deficiency disorders for vitamin A ?
 - c) State the role of the second messengers in regulations of hormonal action.
 - d) What are the major distinguishing features between marasmus and kwashiorkor ?
 - e) What are laboratory tests to assess liver function based on synthetic function ?
 - f) What is the biochemical importance of brown adipose tissue ?
2. Short answer question (any five out of six) : (5x5=25)
 - a) Discuss various mucopolysaccharides and their roles.
 - b) Describe biochemical mechanism of contraction and relaxation of muscle.
 - c) Give an account of diagnostics and thearapeutic use of enzymes.
 - d) Write a short note on detoxification of ammonia in the body.
 - e) Describe deficiency manifestations of Vitamin B1 and Vitamin B6.
 - f) Write functions of phospholipids.



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First B.P.Th. (2012) Examination, Winter 2017
BIOCHEMISTRY

Total Duration : 2 Hours

Total Marks : 40

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 - 7) **Use** a common answerbook for **all** Sections.

1. Short answer question (**any five** out of six) :

(5×3=15)

- a) Write note on cardiac enzymes.
- b) Mechanism of steroid hormone action.
- c) Discuss biochemical events during muscle contraction.
- d) Define specific Dynamic Action and give its significance.
- e) Discuss Transamination and its significance. Add a note on diagnostically important Transaminases.
- f) Give functions of Magnesium and Zinc.

2. Short answer question (**any five** out of six) :

(5×5=25)

- a) Discuss Diabetes Mellitus and metabolic changes in carbohydrate, protein, lipid in it.
- b) Give an account of sources, functions, RDA and deficiency manifestations of Vitamin C.
- c) Discuss Beta-oxidation of fatty acids with its energetics.
- d) Describe Urea cycle. Discuss its regulation and disorders.
- e) Define Enzyme Inhibition. Discuss types of inhibition with suitable examples.
- f) Name the ketone bodies. Discuss the metabolism and significance of ketone bodies.

