

AV - 2372

Second Semester B. Pharm. Examination

BIOCHEMISTRY

Paper - BP 203 T

(USC - 35341)

P. Pages : 3

Time : Three Hours]

[Max. Marks : 75

Note : (1) Answer **All** questions.

(2) Diagrams and Chemical equations should be given wherever necessary.

(3) Illustrate your answer necessary with the help of neat sketches.

(4) Use pen of Blue/Black ink/refill only for writing the answer book

1. (a) Multiple choice questions :—

(i) Which of the following is a purine ?

(a) cytosine (b) Adenine (c) thymine (d) uracil

(ii) Fatty liver is caused due to accumulation of —

(a) fatty acids (b) phospholipids
(c) cholesterol (d) triacylglycerol

(iii) Gout is a metabolic disorder of catabolism of —

(a) pyrimidine (b) Alanine (c) purine (d) phenylalanine

(iv) Citric acid cycle occurs in —

(a) cytoplasm (b) mitochondrial matrix
(c) endoplasmic reticulum (d) Golgi bodies

(v) The main site of gluconeogenesis is —

(a) Kidney (b) Liver (c) brain (d) muscle

(vi) Which of the following is not disaccharides —

(a) Maltose (b) Starch (c) Lactose (d) Sucrose

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- (vii) How many different amino acids are there —
(a) 3 (b) 100 (c) 20 (d) infinite number
- (viii) The enzyme of Urea synthesis are found in
(a) Mitochondria only
(b) Cytosol only
(c) Both mitochondria and cytosol
(d) nucleus.
- (ix) The sugar in RNA is ——
(a) phosphate (b) ribose (c) uracil (d) deoxyribose
- (x) Which of the following are reduced coenzymes ?
(a) ATP and GTP (b) Coenzyme A
(c) NADH and FADH₂ (d) Pyridoxal phosphate 10
- (b) Solve the following questions :—
- (i) Define carbohydrates. Give two examples.
- (ii) Enlist disorders of urea cycle.
- (iii) What is obesity ?
- (iv) How many ATP are generated in a Glycolysis cycle ?
- (v) Define co - enzymes. 10

2. Long answer questions (Answer any **Two**) :—

- (a) Describe in detail classification, chemical nature and biological role of carbohydrate.
- (b) Describe in detail reactions involved in β - oxidation of saturated fatty acids.
- (c) Explain in detail reactions involved in HMP shunt with its significance.

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3. Short answer questions (solve any **Seven**) :—

- (a) Explain Glycogen storage disease.
- (b) Explain catabolism of phenylalanine and tyrosine.
- (c) Explain Electron transport chain (ETC) and its mechanism.
- (d) Write a note on Phenylketonuria.
- (e) Describe structure of DNA with their functions.
- (f) Explain formation and utilization of ketone bodies.
- (g) Explain disorders of lipid metabolism.
- (h) Discuss therapeutic and diagnostic applications of Enzymes.
- (i) Describe catabolism of purine nucleotides.

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