

Sl.No. M2339

Course Code : 161021T05

**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University)**

MBBS DEGREE EXAMINATION – July 2021

First Year

BIOCHEMISTRY - PAPER I

SECTION A

Time: Fifteen Minutes

Maximum: 15 marks

Register Number :

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Signature of the candidate

Signature of the Invigilator

Instructions to the candidates

- 1. Write your Register Number and sign at the place specified on the first page of this Question Booklet.**
- 2. Do not open this question booklet until Invigilator announces the commencement of the examination.**
- 3. Answer ALL the Fifteen questions. They carry equal marks. No negative marking for wrong answers.**
- 4. Answers should be marked legibly in the SHEET provided in capital letters.**
- 5. THE QUESTION BOOKLET SHOULD NOT BE TAKEN OUT OF THE EXAMINATION HALL.**
- 6. Questions should not be copied and taken out of the Examination Hall. Any one found violating this rule shall not be permitted to write the examination and shall be sent out of the Hall.**
- 7. At the end of 15 minutes, when the Invigilator announces 'STOP WRITING' you must stop writing immediately. If the candidate tries to attempt to answer the questions after the prescribed time, their answer script becomes invalid.**
- 8. Hand over the questions booklet containing answer sheet to the invigilator when you finish answering or immediately after 15 minutes.**

BIOCHEMISTRY - PAPER I
SECTION-A (15X1-15 MARKS)
(Multiple choice questions)

Time: Fifteen Minutes

Maximum: 15 marks

Select the most appropriate answer and answer in the answer sheet attached:

1. Glucose transport across the cell membrane by GLUT is carried out by
 - A. Simple diffusion
 - B. Facilitated diffusion
 - C. Ion channels
 - D. Passive diffusion
2. Serum level of troponin-T in myocardial infarction
 - A. Released into blood within 4 hours, Peaks at 14-24 hours
 - B. Released into blood within 6 hours, Peaks at 72 hours
 - C. Released into blood within 2-4 hours, Peaks at 48 hours
 - D. Released into blood within 1-4 hours, Peaks at 6-7 hours
3. Metal ion required for the activity of lysyl oxidase
 - A. Calcium
 - B. Copper
 - C. Molybdenum
 - D. Zinc
4. Biochemical defect in tangier's disease
 - A. Lipoprotein lipase deficiency
 - B. Absence/defect of ATP- binding cassette transporter-1
 - C. Defect in LDL receptor
 - D. Abnormal APO E production
5. All are examples of NAD⁺ linked dehydrogenases except
 - A. Glucose-6- phosphate dehydrogenase
 - B. Isocitrate dehydrogenase
 - C. Malate dehydrogenase
 - D. Glyceraldehyde -3-phosphate dehydrogenase

(p.t.o.)

-- (2) --

6. Characteristic clinical feature in acute intermittent porphyria
 - A. Port – urine coloured urine and faces
 - B. Marked photo sensitivity and erythrodontia
 - C. Abdominal and neurological manifestations with no photosensitivity
 - D. Repeated attacks of dermatitis and scarring

7. Defect in uptake of bilirubin, asymptomatic patient with presence of mild jaundice (bilirubin around 3mg/ dl) is suggestive of
 - A. Dubin johnson's syndrome
 - B. Criggler-najjar syndrome
 - C. Rotor syndrome
 - D. Gilbert's disease

8. Acetyl-COA carboxylase belong to which group of enzymes
 - A. Ligases
 - B. Hydrolases
 - C. Transperases
 - D. Isomerases

9. Reversible protein phosphorylation in enzymes is an example for
 - A. Feedback inhibition
 - B. Covalent modification
 - C. Allosteric regulation
 - D. Cooperative activation

10. Endogenous synthesis of carnitine requires which vitamin
 - A. Vitamin -C
 - B. Biotin
 - C. Pyridoxine
 - D. Cobalamin

11. To prevent rickets in a case of chronic renal failure which of the following must be administered
 - A. Cholecalciferol
 - B. Ergocalciferol
 - C. 25- hydroxy cholecalciferol
 - D. Calcitriol

(p.t.o.)
(Sl.No. M 2339)

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12. APO B 48 and APO B 100 differ due to
- A. RNA splicing
 - B. APO B gene
 - C. Chromosomal loci
 - D. Gene rearrangement
13. c GMP is a second messenger for
- A. Thyroxine
 - B. Atrial natriuretic peptide
 - C. Growth hormone
 - D. Cortisone
14. Specific dynamic action is maximum in
- A. Proteins
 - B. Carbohydrates
 - C. Fats
 - D. Vitamins
15. Molisch test is positive in all except
- A. Mucoproteins
 - B. Glycoproteins
 - C. Sucrose
 - D. Phospholipids

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First Year

BIOCHEMISTRY - PAPER I

Time : Three hours

Maximum : 80 marks

Answer ALL Questions

Answer Section A in the Answer Sheet attached to it 15 marks – 15 minutes to be handed over to the invigilator immediately after 15 minutes

Answer Section B in the same answer book

Time : 2 hours 45 minutes

SECTION – B

Maximum : 65 marks

I. Write essays on : (2 x 15 = 30)

1. Name the ketone bodies? How are they formed and utilized in the body?
Add a note on diabetic ketoacidosis. (1+8+6)
2. Describe the components and reactions of electron transport chain add a note on chemiosmotic theory and inhibitors of ETC. (8+5+2)

II. Short notes on : (5 x 5= 25)

3. Compare and contrast oxygen dissociation curve of hemoglobin and myoglobin.
4. Reverse cholesterol transport.
5. Enzyme inhibition.
6. Glycated haemoglobin.
7. Active form and metabolic function of Vitamin D.

III. Answer briefly on : (5 x 2 = 10)

8. Rapaport leubering shunt.
9. Liposomes.
10. Von gierke's disease.
11. Marker enzymes cell organelles.
12. Wilson's disease.
