Sl.No. M21003 **Course Code : 161021T05**

VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM.

(Deemed to be University)

MBBS DEGREE EXAMINATION – February 2019

First Year

BIOCHEMISTRY - PAPER I

SECTION A

Time: Fifteen Minutes **Maximum: 15 marks**

Register Number : | | | | | | | | | | |

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.**

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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. Protein synthesis occurs in
   A. Peroxisomes
   B. Mitochondria
   C. Endoplasmic reticulum
   D. Golgi bodies

2. Molybdinum is present in
   A. Cytochrome Oxidase
   B. Phosphoglucomutase
   C. Xanthine Oxidase
   D. Carbonic anhydrase

3. In competitive Inhibition
   A. Km is increased & Vmax is increased
   B. Km is decreased & Vmax is normal
   C. Km is increased & Vmax is normal
   D. Km is decreased & Vmax is increased

4. Benedict's test is negative for
   A. Glucose
   B. Sucrose
   C. Maltose
   D. Lactose

5. Bile acids are formed from
   A. Fatty acids
   B. Phospholipids
   C. Cholesterol
   D. Triacylglycerol

6. Type V glycogen storage disease is due to deficiency of the following enzyme
   A. Liver phosphorylase
   B. Muscle phosphorylase
   C.Glucose-6-phosphatase
   D. Lysosomal maltase

(p.t.o.)

7. The normal fasting plasma glucose level is
   A. 60 -80mg/dl
   B. 70-110mg/dl
   C. <140mg/dl
   D. >200mg/dl

8. Acetyl CoA carboxylase is activated by
   A. Insulin
   B. Glucocorticoids
   C. Glucagon
   D. Growth hormone

9. Type I hyperlipoprotenaemia is due to
   A. LDL receptor defect
   B. Lipoprotein lipase deficiency
   C. Abnormal apoE
   D. Over production of VLDL

10. Soluble mobile component of Electron Transport Chain is
   A. CoQ
   B. Cytochrome a
   C. Cytochrome b
   D. Cytochrome c(D)

11. Congenital erythropoietic porphyria is due to deficiency of
   A. ALA synthase
   B. Uroporphyrinogen III cosynthase
   C. Coproporphyrinogen oxidase
   D. Uroporphyrinogen decarboxylase

12. Amino acid required for heme synthesis
   A. Glutamic acid
   B. Glutamine
   C. Glycine
   D. Serine

13. Active form of Vitamin D is
   A. 25-Hydroxy cholecalciferol
   B. 1, 25 - Dihydroxy cholecalciferol
   C. 1, 24 - Dihydroxy cholecalciferol
   D. 7 – Dehydrocholesterol

14. Form of Vitamin A required for visual function is
   A. Beta carotene
   B. Retinoic acid
   C. Retinaldehyde
   D. Retinol

15. Respiratory Quotient of fat is
   A. 0.7
   B. 1
   C. 0.8
   D. 0.9

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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. Classify lipoproteins. Discuss about the metabolism of very low density lipoproteins with suitable diagram and techniques used for separation of lipoproteins. (3+8+4)
2. Define gluconeogenesis. Write about the substrates, reactions and regulation of gluconeogenesis. (2+2+7+4)

II. Write short notes on : **(5 x 5 = 25)**

3. Suicidal inhibition of enzyme activity.
4. Structure of Haemoglobin.
5. Biochemical functions of Vitamin B_6.
6. Amphibolic role of citric acid cycle.
7. Basal metabolic rate.

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

8. Uncouplers of oxidative phosphorylation.
9. Km and its significance
10. Lysosomes
11. Coenzyme form of pantothenic acid.
12. Acute intermittent porphyria.

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