

.No. M21500

Course Code : 161321T03

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

**BDS DEGREE EXAMINATION – August 2019  
First Year**

**BIOCHEMISTRY**

**SECTION A**

**Time: Twenty Minutes**

**Maximum: 20 marks**

**Register Number :**

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**Signature of the candidate**

**Signature of the Invigilator**

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**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 Twenty 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 20 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 20 minutes.**

**BIOCHEMISTRY**  
**SECTION-A (20X1=20 MARKS)**  
(Multiple choice questions)

Time: Twenty Minutes

Maximum: 20 marks

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

1. Lipoprotein involved in reverse cholesterol transport is
  - A. Very Low Density Lipoprotein
  - B. Low Density Lipoprotein
  - C. Intermediate Density Lipoprotein
  - D. High Density Lipoprotein
  
2. Which one of the following helps in transport of fatty acid from cytosol to mitochondria
  - A. Albumin
  - B. Globulin
  - C. Carnitine
  - D. Pre - albumin
  
3. The net gain of ATP per molecule of palmitic acid on complete oxidation is
  - A. 12
  - B. 106
  - C. 38
  - D. 135
  
4. Ketone bodies are synthesized in
  - A. Liver
  - B. Adipose tissue
  - C. Muscle
  - D. Kidney
  
5. Bile salts helps in the digestion of
  - A. Proteins
  - B. Carbohydrates
  - C. Lipids
  - D. Nucleic acid

(p.t.o.)

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6. Which one of the following cellular organelle serve as a site for protein synthesis?
  - A. Golgi apparatus
  - B. Endoplasmic Reticulum
  - C. Mitochondria
  - D. Peroxisomes
  
7. The beneficial effects of dietary fibre includes all the following EXCEPT
  - A. Helping in digestion process
  - B. Increases motility of intestine
  - C. Decreases absorption of Cholesterol
  - D. Increases glucose tolerance
  
8. Negative nitrogen balance is observed in
  - A. Pregnancy
  - B. Chronic Fever
  - C. Convalescence
  - D. Growth period
  
9. The number of ATP's generated when electron is transferred from NADH which is generated in Mitochondrial matrix is
  - A. 1 ATP
  - B. 2 ATP
  - C. 3 ATP
  - D. 4 ATP
  
10. Complex IV of Electron Transport chain is inhibited by
  - A. Cyanide
  - B. Napthoquinone
  - C. Barbiturates
  - D. Thyroxine
  
11. Which of the following is an oncogene
  - A. RB
  - B. P53
  - C. Src
  - D. WT

12. Which one of the following is an amplification technique
- A. RFLP
  - B. Southern blotting
  - C. PCR
  - D. Recombinant DNA
13. Which one of the following acts as the most effective naturally occurring chain breaking antioxidant in tissues?
- A. Vitamin E
  - B. Vitamin C
  - C. Ceruloplasmin
  - D. Caffeine
14. All the following are Phase 1 reactions of Detoxification **EXCEPT**
- A. Hydrolysis
  - B. Oxidation
  - C. Conjugation
  - D. Reduction
15. Normal level of serum albumin is \_\_\_\_\_ mg/dl
- A. 3.5 – 5.0
  - B. 2.5 – 4.0
  - C. 5.0 – 7.0
  - D. 3.5 – 6.5
16. Normal anion gap in plasma is about
- A. 5mEq/L
  - B. 15mEq/L
  - C. 40mEq/L
  - D. 25mEq/L
17. Metabolic acidosis occur in all of the following except
- A. Diabetes Mellitus
  - B. Vomiting
  - C. Diarrhoea
  - D. Addison's disease

18. The normal plasma pH is

- A. 7.35 – 7.45
- B. 7.0 – 8.0
- C. 4.5 – 8.5
- D. 6.0 – 7.0

19. The extracellular cation present in maximum concentration is

- A. Calcium
- B. Magnesium
- C. Potassium
- D. Sodium

20. The normal plasma potassium level is \_\_\_\_\_ mmol / L [      ]

- A. 3.5 – 5.0
- B. 1.5 – 3.0
- C. 5.5 – 7.5
- D. 7.5 – 10.0

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**BIOCHEMISTRY**

Time : Three hours

Maximum : 70 marks

Answer ALL Questions

Answer Section A in the Answer Sheet attached to it 20 marks – 20 minutes to be handed over to the invigilator immediately after 20 minutes

Answer Section B & C in the same answer book

Time : 2 hours 40 minutes

**SECTION – B & C**

Maximum : 50 marks

**SECTION – B**

I. Write an Essay on : (1 x 10 = 10)

1. Write in detail about the steps in citric acid cycle. Add a note on importance of citric acid cycle. (7 + 3)

II. Write short notes on : (3 x 5 = 15)

2. Isoenzymes

3. Role of vitamin D in Calcium metabolism

4. Renal Function Tests

**SECTION – C**

III. Write an Essay on : (1 x 10 = 10)

5. Write in detail about synthesis of Heme. Add a note on its regulation. (7 + 3)

IV. Write short notes on : (3 x 5 = 15)

6. Denaturation.

7. Types and functions of RNA.

8. Tyrosine metabolism

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