Sl.No. M21006 **Course Code: 13118102**

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

BDS DEGREE EXAMINATION – September 2021
First Year
GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY

SECTION A

Time: Twenty Minutes **Maximum: 20 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 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. Anyone 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.**

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GENERAL HUMAN PHYSIOLOGY

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. Rate of diffusion of a substance from a region of its higher concentration to a region of lower concentration is directly proportional to
    A. Molecular size of the substance
    B. Temperature
    C. Thickness of the membrane
    D. Water solubility of the substance
2. Each gm% of haemoglobin, when fully saturated, can carry how much of Oxygen?
    A. 1.34 ml
    B. 3.14 ml
    C. 4.13 ml
    D. 5 ml
3. Antibodies which can easily cross the placenta
    A. IgG
    B. IgA
    C. IgM
    D. IgE
4. Long Plateau phase of action potential in myocardial fibers is due to
    A. Increase Na+ conductance
    B. Inactivation of Ca2+ and Na+ influx
    C. Decreased k+ conductance
    D. Increased k+ and Ca2+ conductance
5. The satiety center is located in which portion of Hypothalamus?
    A. Dorso Medial Nucleus
    B. Ventro Medical Nucleus
    C. Preoptic Area
    D. Lateral Nucleus
6. Major source of oestrogen
    A. Granulosa cell of graffian follicle
    B. Theca interna of graffian follicle
    C. Testis
    D. Granulosa cells
7. Which is the symptom of Covid-19?
    A. Loss of vision
    B. Loss of taste
    C. Loss of hearing
    D. Loss of touch
8. Maximum Na+ concentration is found in?
    A. Pancreatic juice
    B. Gastric juice
    C. Bile juice
    D. Intestinal juice
9. Most common site of lesion to the pyramidal tracts
    A. Internal capsule
    B. Midbrain
    C. Pins
    D. Medulla
10. The most biologically active iodothyronine secreted by the thyroid follicles is
    A. T3
    B. T4
    C. Reverse T3
    D. Thyroglobulin

BIOCHEMISTRY

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

1. Glycerol is the back bone of
    A. Glycerophospholipids
    B. Sphingo phospholipids
    C. Glycolipids
    D. Cholesterol ester
2. Triple helix is the example for
    A. Primary structure of protein
    B. Secondary structure of protein
    C. Tertiary structure of protein
    D. Quart nary structure of protein
3. Transaminase enzymes belongs to the class of
    A. Hydrolase
    B. Transferase
    C. Oxido reductase
    D. Isomerase
4. RNA present in
    A. Nucleus
    B. Only cytoplasm
    C. Mitochondria
    D. Both cytoplasm and nucleous
5. Bile acids are derived from
    A. Phospholipids
    B. Triacyl glycerol
    C. Fatty acids
    D. Cholesterol
6. Which of the following does not take part in the human urea cycle
    A. Arginine
    B. Aspartate
    C. Arginosuccinate
    D. Urease
7. The end product of purine metabolism in human is
    A. Creatinine
    B. Uric acid
    C. Urea
    D. Ammonia
8. Hormone that have intra cellular receptor
    A. Glucocorticoids
    B. ACTH
    C. TSH
    D. Glucagon
9. Earlier marker of myocardial infarction is
    A. CK 1
    B. CK 2
    C. CK 3
    D. AST
10. Which one is not an essential amino acid
    A. Valine
    B. Isoleucine
    C. Glycine
    D. Phenylalanine

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BDS DEGREE EXAMINATION – September 2021

First Year

GENERAL HUMAN PHYSIOLOGY AND 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 separate answer book

Time: 2 hours 40 minutes **SECTION – B& C** Maximum: 50 marks

SECTION – B
GENERAL HUMAN PHYSIOLOGY (25 MARKS)

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

1. Define cardiac cycle. Describe in detail the pressure volume changes that occur during a cardiac cycle with suitable diagram. Add a note on heart sounds. (2+6+2=10)

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

2. Oxygen Dissociation Curve.
3. Juxta-Glomercular Apparatus.
4. Mechanism of gastric secretion.

BIOCHEMISTRY (25 MARKS)

SECTION – C

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

1. Describe the pathway of how glucose is synthesized from aminoacids and its regulation. Mention key enzyme of gluconeogenesis.

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

2. Ketogenesis and its importance.
3. Short notes on vitamin C and its deficiency manifestation.
4. What is isoenzyme? Write clinical importance of LDH and its enzyme.

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