

Sl.No. M23003

Course Code : 161021T03

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

MBBS DEGREE EXAMINATION – October 2020

First Year

HUMAN PHYSIOLOGY INCLUDING BIOPHYSICS- 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.**

HUMAN PHYSIOLOGY INCLUDING BIOPHYSICS- 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. Normal glomerular filtration rate is
 - A. 125ml/min
 - B. 180liters/minute
 - C. 325 mg/minute
 - D. 5liters/minute

2. Non excretory function of the kidney is
 - A. Excretion of urea
 - B. Excretion of uric acid
 - C. Excretion of creatinine
 - D. Secretion of erythropoietin

3. Medullary nephrons helps in
 - A. Formation of urine
 - B. Concentration of urine
 - C. Electrolyte balance
 - D. Activation of vitamin "D"

4. Descending limb of loop of henle is
 - A. Impermeable to water
 - B. Permeable to water
 - C. Permeable to sodium ions
 - D. Permeable to hydrogen ions

5. Regulatory proteins in muscle contraction is
 - A. Albumin and globulin
 - B. Actin and myosin
 - C. Troponin and tropomyosin
 - D. Fibrinogen and troponin

(p.t.o.)

6. Saltatory conduction of nerve impulse takes place in
 - A. Myelinated nerve fibre's
 - B. Nonmyelinated nerve fibre's
 - C. Microglia
 - D. Astrocytes

7. Neurotransmitter released in neuro muscular junction is
 - A. Acetyl choline
 - B. Adrenaline
 - C. Noradrenaline
 - D. Dopamine

8. Cisternae of sarcoplasmic reticulum system contains
 - A. Potassium
 - B. Sodium
 - C. Calcium
 - D. Phosphorus

9. ATP is required for
 - A. Active transport
 - B. Diffusion
 - C. Osmosis
 - D. Passive transport

10. Power house of the cell is
 - A. Ribosomes
 - B. Endoplasmic reticulum
 - C. Golgi apparatus
 - D. Mitochondria

11. Secretin helps in production of pancreatic juice rich in
 - A. Enzymes
 - B. Bicarbonates
 - C. Phosphates
 - D. Hydrogen ions

12. Myenteric plexus normally helps in
- A. Secretions of gastro intestinal tract
 - B. Motility of gastro intestinal tract
 - C. Constipation
 - D. Diarrhoea
13. Sham's feeding is done to study
- A. Cephalic phase of gastric juice secretion
 - B. Hormonal phase of gastric juice secretion
 - C. Gastric phase of gastric secretion
 - D. Intestinal phase of gastric juice secretion
14. Testosterone is secreted by
- A. Sertoli cells
 - B. Corpus luteum
 - C. Interstitial cells of leydig
 - D. Placenta
15. Basis of pregnancy test is
- A. Detection of testosterone in urine
 - B. Detection of oestrogen in urine
 - C. Detection of prolactin in urine
 - D. Detection of human chorionic gonadotropin hormone in urine

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First Year

HUMAN PHYSIOLOGY INCLUDING BIOPHYSICS- 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. Describe the mechanism of coagulation of blood. Add a note on bleeding disorders. (10+5=15)
2. Mention the hormones that maintain normal blood calcium level. What are its actions? Write a note on its applied aspect.

II. Short notes on :

(5 x 5= 25)

3. Compound action potential
4. Active transport.
5. Sertoli cells.
6. Functions of liver.
7. Juxtaglomerular apparatus.

III. Answer briefly on :

(5 x 2 = 10)

8. Secondary active transport
9. Law of intestine
10. Succus entericus.
11. Mention the test for ovulation
12. Cryptorchidism
