

Sl.No. M19003

Course Code : 161021T03

VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM

MBBS DEGREE EXAMINATION – August 2018

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 BIO PHYSICS - 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. Which of the following is a feature of macula densa?
 - A. Act as baroreceptors
 - B. Innervated by sympathetic nerves
 - C. Release renin
 - D. Sensitive to NaCl concentration

2. In nephrons, active reabsorption of Glucose occurs in
 - A. Proximal Tubule
 - B. Loop of Henle
 - C. Distal tubule
 - D. Collecting tubule

3. Antibodies which can easily cross the placental barrier
 - A. IgG
 - B. IgA
 - C. IgM
 - D. IgE

4. Which of the following is a function of thrombin?
 - A. Activation of Factor XIII to stabilize fibrinolysis
 - B. Conversion of Factor VII to VIIa
 - C. Conversion of fibrinogen to fibrin
 - D. Enhancement of Factor V, VIII and XI activity

5. Cortisol secretion is high during
 - A. Evening
 - B. Night
 - C. Afternoon
 - D. Morning

6. The increased secretion of Growth hormone after puberty results in
 - A. Tetany
 - B. Acromegaly
 - C. Myxoedema
 - D. Cushings syndrome

7. Steroid hormones acts on
- A. Nuclear Receptors
 - B. Cytoplasmic Receptors
 - C. Membrane Receptors
 - D. All the above
8. Saltatory conduction is found in
- A. Non-myelinated nerve fibers
 - B. Myelinated nerve fibers
 - C. Salivary gland
 - D. Parathyroid gland
9. _____ feedback is often referred to as a vicious cycle because it leads to _____ instability and sometimes death
- A. Positive, progressive
 - B. Positive, diminished
 - C. Negative, progressive
 - D. Negative, diminished
10. The total body water is
- A. 20% of body weight
 - B. 40% of body weight
 - C. 60% of body weight
 - D. 80% of body weight
11. Mass peristalsis usually occurs in
- A. Esophagus
 - B. Stomach
 - C. Small intestine
 - D. Large intestine
12. Secretin causes
- A. Enzyme rich secretion of pancreatic juice
 - B. Acid rich secretion of gastric juice
 - C. Bicarbonate rich secretion of salivary juice
 - D. Bicarbonate rich secretion of pancreatic juice
13. Chief cells secrete
- A. Hydrochloric acid
 - B. Bicarbonates
 - C. Pepsinogen
 - D. Intrinsic factor

-- (3) --

14. The normal sperm count is

- A. 10million/ml
- B. 30 million/ml
- C. 40 million/ml
- D. 100 million/ml

15. Action of progesterone is

- A. Inhibits spermatogenesis
- B. Inhibits oogenesis
- C. Inhibits Ovulation
- D. Increases basal body temperature after ovulation

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HUMAN PHYSIOLOGY INCLUDING BIO PHYSICS – 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:

(2x15=30)

1. Name three major steps involved in the formation of blood clot. Explain the formation of prothrombin activator by intrinsic mechanism. Add a note on anticoagulants.

(3+5+2)

2. With a neat labeled diagram give the structure of sarcomere. Explain the mechanism of sliding filament theory of muscle contraction. Add a note on muscle fatigue. (3+5+2)

II. Write short notes on:

(5x5=25)

3. Tubular transport maximum

4. Functions of Growth hormone

5. Voltage gated channels

6. Bile Salts

7. Hormonal changes during a menstrual cycle of 28 days.

III. Write briefly on:

(5x2=10)

8. Diffusion

9. Secretin

10. Phases of deglutition

11. Gonadotrophin releasing hormone (GnRH)

12. Oral contraceptives
