

Sl.No. M21919

Course Code : 161021T03

**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM**

**MBBS DEGREE EXAMINATION – October 2019**

**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**

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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 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 response:

1. In the renal tubules, sodium ion is reabsorbed by the following mechanism except:
  - A. Co-transport
  - B. Counter transport
  - C. Active – passive transport
  - D. Osmosis
  
2. Which of the following hormone is produced from Kidney?
  - A. Aldosterone
  - B. Erythropoietin
  - C. Antidiuretic hormone
  - D. Secretin
  
3. Urea clearance is defined as.....
  - A. Amount of urea cleared from urine in unit time
  - B. Amount of urea cleared from plasma in unit time
  - C. Amount of plasma cleared off urea in unit time
  - D. Amount of urine cleared off urea in unit time
  
4. The organ commonly affected by frostbite is all of the following except....
  - A. Ear lobe
  - B. Digits of foot
  - C. Digits of hands
  - D. Oesophagus
  
5. Myesthenia gravis is produced due to:
  - A. Defective production of Acetylcholine
  - B. Excessive destruction of Acetylcholine
  - C. Destruction of acetylcholine receptors
  - D. Delayed breakdown of acetylcholine

(p.t.o.)

6. The period in which a second stimulus of greater intensity produces a response is termed as:
- A. Latent period
  - B. Relative refractory period
  - C. Absolute refractory period
  - D. Contraction period
7. Which of the following is not a feature of red muscle?
- A. Responds slowly
  - B. Has a long latent period
  - C. Helps in postural maintenance
  - D. Has less myoglobin content
8. Which of the following statements is not true about miniature endplate potential?
- A. It occurs without being stimulated at rest
  - B. Action potential can be generated
  - C. Small quantity of acetylcholine is released
  - D. It alters the permeability of motor end plate
9. The movement of solvent from the region of higher concentration to the region of lower concentration through a semipermeable membrane is:
- A. Diffusion
  - B. Osmosis
  - C. Endocytosis
  - D. Pinocytosis
10. Transport of sodium and glucose across cell membrane is an example of .....
- A. Antiport
  - B. Symport
  - C. Uniport
  - D. Diffusion

11. Potassium ions enter the Oxyntic cells through the basolateral membrane by :
  - A.  $K^+ H^+$  ion exchanger
  - B. Diffusion
  - C. Co-transport with Sodium
  - D.  $Na^+ K^+$  exchanger
  
12. All of the following are the functions of Gastrin except.....
  - A. Inhibits gastric motility
  - B. Stimulation of gastric acid secretion
  - C. Stimulation of mucosal growth of stomach
  - D. Causes contraction of gastroesophageal sphincter
  
13. Gall bladder bile, compared to the liver bile, has.....
  - A. Less water content and more concentrated
  - B. Less alkalinity
  - C. More hydrogen ions
  - D. More bile salts
  
14. Postpartum hemorrhage refers to :
  - A. Excess loss of blood during placental delivery
  - B. Excess loss of blood during menstruation
  - C. Loss of blood occurring in fetus during normal delivery
  - D. Intermittent hemorrhage occurring throughout pregnancy
  
15. Normally the number of sperms required for fertilizing the ovum is:
  - A. One million
  - B. One sperm
  - C. 20 million
  - D. 100 million

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(Sl.No. M21919)

**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM**

**MBBS DEGREE EXAMINATION – August 2019**

**First Year**

**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:**

**(2 x 15=30)**

1. Define Landsteiner's law; Describe ABO and Rh blood group systems. What are the complications of mismatched blood transfusion? Add a note on erythroblastosis foetalis. (1+3+3+4+4)
2. Name the layers in Adrenal cortex & mention the hormones produced from each layer; Describe the actions and regulation of a hormone produced from the middle layer. Mention the symptoms due to its malfunctions. (3+5+3+4)

**II. Write short notes on:**

**(5 x 5=25)**

3. Wallerian degeneration and regeneration
4. Role of kidney in acid base balance
5. Hormonal basis for ovarian and endometrial changes during menstrual cycle.
6. Composition and functions of exocrine pancreatic secretion
7. Neuroendocrine hormones and their actions.

**III. Write briefly on:**

**(5x2=10)**

8. Endosmosis and exosmosis
9. Hormones of Islets of Langerhans
10. Functions of bile
11. Innervation of urinary bladder
12. Corpus luteum