

Sl.No. M23004

Course Code : 161021T04

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

MBBS DEGREE EXAMINATION – October 2020

First Year

HUMAN PHYSIOLOGY INCLUDING BIOPHYSICS- PAPER II

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 II

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. Cyanosis mainly doesn't occur in:
 - A. Hypoxic hypoxia
 - B. Anaemic hypoxia
 - C. Histotoxic hypoxia
 - D. Stagnant hypoxia

2. The volume of gas contained in the lung at the end of maximum inspiration is:
 - A. Functional residual capacity
 - B. Inspiratory capacity
 - C. Inspiratory reserve volume
 - D. Total lung capacity

3. Hamburger shift is also called:
 - A. Hydrogen shift
 - B. HCO_3 shift
 - C. Chloride shift
 - D. Na^+ shift

4. J receptors are situated in:
 - A. Heart
 - B. Blood vessels
 - C. Alveolar interstitium
 - D. Carotid body

5. The most common form of hypoxia is:
 - A. Hypoxic
 - B. Stagnant
 - C. Anemic
 - D. Histotoxic

(p.t.o.)

-- (2) --

6. The most rapidly propagating tissue in heart is:
 - A. Ventricular tissue
 - B. Purkinje fibres
 - C. Atrial muscle
 - D. AV node

7. Most important cardiac and vasomotor centres are located in
 - A. Medulla
 - B. Pons
 - C. Hypothalamus
 - D. Cerebral cortex

8. Preload of the heart is determined by:
 - A. End diastolic volume
 - B. Ejection volume
 - C. End systolic volume
 - D. Systolic vascular resistance

9. Which of these are myelinated earliest?
 - A. Spinothalamic tracts
 - B. Posterior columns
 - C. Pyramidal tracts
 - D. Reticulospinal tracts

10. Complete return of functional loss in an injured nerve is noticed in cases of:
 - A. Neuropraxia
 - B. Axontmesia
 - C. Neuratmesia
 - D. Blocked synapse

11. The neurotransmitter released from gamma motor neuron is:
 - A. Serotonin
 - B. Acetylcholine
 - C. Adernline
 - D. Sustance- P

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12. The receptor for inverse stretch reflex is:

- A. Golgi tendon organ
- B. Nuclear bag fibre
- C. Nuclear chain fibre
- D. None of the above

13. Cylindrical lenses are prescribed in:

- A. Presbyopia
- B. Astigmatism
- C. Myopia
- D. Squint

14. The organ of corti is on the :

- A. Stria vascularis
- B. Tympanic membrane
- C. Tectorial membrane
- D. Basilar membrane

15. Medial geniculate body is associated with:

- A. Taste
- B. Hearing
- C. Vision
- D. Smell

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First Year

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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. What is Hypoxia? Explain the different types of Hypoxia with examples. Add a note on acclimatization at high altitudes. (2+7+6)
2. Name the Functional lobes of cerebellum. Describe the connections and functions of Neocerebellum. Mention the clinical features of cerebellar disease.

II. Short notes on : (5 x 5 = 25)

3. Travelling wave theory.
4. Brown sequard syndrome.
5. Surfactant.
6. Pacemaker potential
7. Taste pathway.

III. Answer briefly on : (5 x 2 = 10)

8. What is the normal intra pulmonary and intrapleural pressures?
9. Define Frank Starling's law. How does this law play a role in regulating the stroke volume.
10. Define synapse and mention its types.
11. List the extrapyramidal tracts.
12. What are the different types of colour blindness?
