

Sl.No. M19004

Course Code : 161021T04

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

**MBBS DEGREE EXAMINATION – August 2018**

**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**

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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.**
- 7. 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.**
- 8. 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.**
- 9. 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 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. The peak pressure of atrial systole is
  - A. 7 – 8 mm of Hg
  - B. 8 – 15 mm of Hg
  - C. 15 – 20 mm of Hg
  - D. 20 – 25 mm of Hg
  
2. Central venous pressure is the value of blood pressure found in the
  - a. Inferior vena cava
  - b. Superior vena cava
  - c. Pulmonary artery
  - d. Right atrium
  
3. Most potent circulating vasoconstrictor is
  - a. Epinephrine
  - b. Nor - Epinephrine
  - c. Angiotensin II
  - d. Serotonin
  
4. Chemoreceptors operate between pressure range of
  - a. 15 – 40 mm of Hg
  - b. 40 – 100 mm of Hg
  - c. 70 – 150 mm of Hg
  - d. 70 – 120 mm of Hg
  
5. Eupnoea means
  - a. Rhythmic normal breathing at rest
  - b. Difficulty in breathing
  - c. Cessation of breathing
  - d. Consciousness of breathing at rest

(p.t.o.)

6. Shifting of O<sub>2</sub> – hemoglobin curve to the right means
  - a. Decreased O<sub>2</sub> delivery to tissues
  - b. Increased O<sub>2</sub> delivery to tissues
  - c. Loading of CO<sub>2</sub> to blood
  - d. Loading of O<sub>2</sub> to blood
  
7. Most potent respiratory stimulant is
  - a. Oxygen
  - b. Carbondioxide
  - c. H<sup>+</sup>
  - d. K<sup>+</sup>
  
8. An athlete is considered to have performed better than others for the same turn out of effort if
  - a. Increase in heart rate is less
  - b. Increase in heart rate is more
  - c. Pulmonary ventilation achieved is close to the predicted maximum breathing capacity
  - d. Oxygen consumption and carbondioxide output is less
  
9. Electrical event that occur in neuronal inhibition is
  - a. Polarization
  - b. Depolarization
  - c. Hyperpolarization
  - d. None of the above
  
10. Not a function of extrapyramidal tracts
  - a. Responsible for the control of muscle tone, posture and equilibrium
  - b. Control the movements of eyeballs
  - c. Control co-ordinated movement of arms and legs during walking
  - d. Exert tonic excitatory control over the lower centers
  
11. The sub cortical centres that control body movements include all except
  - a. Cerebellum
  - b. Basal ganglia
  - c. Spinal cord
  - d. Brainstem nuclei

12. CSF is principally secreted by
- Choroid plexus
  - Meningeal blood vessels
  - Ependymal lining of ventricles
  - Blood vessels of spinal cord
13. Which of the papilla do not contain taste buds
- Fungiform
  - Filiform
  - Vallate
  - Foliate
14. The fovea centralis is point of greatest visual acuity because
- Rod free portion of retina
  - Avascular
  - Highly developed in humans
  - Each foveal cone is connected to a single fiber in the optic nerve
15. The ability of the eye to focus an object at varying distance is called
- Near response
  - Visual reflex
  - Accommodation
  - Pupillary reflex

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

**MBBS DEGREE EXAMINATION – August 2018**

**First Year**

**HUMAN PHYSIOLOGY INCLUDING BIO PHYSICS – PAPER II**

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. Explain the neural and chemical regulation of respiration? Write a note on dyspnoea. (6+6+3)
2. Draw layers of retina? Give the origin, course and termination of visual pathway? Describe the effects of lesion of visual pathway? (5+5+5)

**II. Write short notes on:**

**(5 x 5=25)**

3. Short term regulation of Blood pressure
4. Cerebral circulation
5. Basal ganglia – connection and functions
6. Brown sequard syndrome
7. Pain pathway and referred pain

**III. Write briefly on:**

**(5 x 2=10)**

8. Types of blood flow –Reynolds number
9. Acclimatization in high altitude
10. UMN and LMN lesion
11. Reciprocal innervations
12. Basic taste sensation and innervations

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