THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0123] JANUARY 2023 Sub. Code : 6054

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

FIRST YEAR – (CBME)

PAPER II – PHYSIOLOGY

Q.P. Code: 526054

Time: 30 Minutes **Maximum : 20 Marks**

Answer All Questions

Choose one correct answer in the box provided in the Answer Script. No overwriting should be done. Choice should be given in Capital Letters.

III. Multiple Choice Questions: (20 x 1 = 20)

1. Heart rate in atrial flutter is about
   A) 95 – 150 beats B) 100 – 175 beats C) 200 – 350 beats D) >350 beats

2. "Last ditch stand" pressure control mechanism is by
   A) Baroreceptor reflex B) Chemoreceptor reflex
   C) CNS ischemic response D) Atrial reflex

3. Frank – Starling's law implies
   A) Increase in venous return increases cardiac output
   B) Increased vagal discharge increases cardiac output
   C) Increased heart rate causes increased cardiac output
   D) Increased blood pressure increased cardiac output

4. "Machinery murmur" is heard in
   A) Tetralogy of Fallot B) Patent ductus arteriosus
   C) Ventricular septal defect D) Atrial septal defect

5. Transit time from arteriolar to the venular end of an average-sized capillary is
   A) 6-8 seconds B) 10-15 seconds C) 1-2 seconds D) 3-4 seconds

6. Measurement of lung volumes with a body plethysmograph uses
   A) Dalton's law B) Herny's law C) Boyle's law D) Graham's law

7. In healthy individuals, Physiological dead space is
   A) Double than that of anatomical dead space
   B) Equal to anatomical dead space
   C) Less than that of anatomical dead space
   D) Triple than that of anatomical dead space

8. Hering Breuer inflation reflex gets activated when the tidal volume is
   A) > 500 ml B) > 1000 ml C) > 1500 ml D) > 1200 ml

9. Primary stimulus for the excitation of the chemosensitive neurons
   A) H+ B) CO2 C) O2 D) HCO3-

10. When a person is using exclusively fats for metabolic energy, the Respiratory exchange ratio (R) will be
    A) 1.5 B) 0.7 C) 0.4 D) 0.8

11. The synapse in cerebral and cerebellar cortex is located commonly in the _____.
    A) Axon hillock B) Dendritic spines C) Axon D) Soma

12. Jendrassik's maneuver facilitates knee jerk due to increased _____ discharge.
    A) α motor neuron B) β motor neuron C) γ motor neuron D) δ motor neuron

13. Annulospiral endings are
    A) Group Iafibres B) Group II fibres
    C) Dynamic Gamma fibres D) Static gamma fibres

14. Which of the nucleus plays a major role in cognitive control of motor activity?
    A) Putamen B) Caudate C) Substantia nigra D) Subthalamus

15. Thalamus contains inhibitory neurons in
    A) Midline nucleus B) Intralaminar nucleus
    C) Thalamic reticular nucleus D) Ventroposterolateral nucleus

16. Mossy fibres in cerebellum make direct synaptic connection with
    A) Granule cells B) Purkinjie cells C) Stellate cells D) Basket cells

17. Normal CSF pressure when a person is lying in horizontal position averages
    A) 100 mm of H_2O B) 90 mm of H_2O C) 130 mm of H_2O D) 200 mm of H_2O

18. Lesion in optic chiasma causes
    A) Binasal hemianopia B) Bitemporal hemianopia
    C) Contralateral homonymous hemianopia D) Ipsilateral complete blindness

19. Vitamin A is stored in _____ of retina
    A) Ganglion cell layer B) Pigment epithelial layer
    C) Outer nuclear layer D) Inner nuclear layer

20. The central fovea contains more of
    A) Cones B) Rods C) Both rods and cones D) Ganglion cells.

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