

**M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER II – PHYSIOLOGY**

MULTIPLE CHOICE QUESTIONS

Q.P. Code: 526054

Time: 30 Minutes

Maximum : 20 Marks

Answer All Questions

Write one correct answer in the box provided in the Answer Script. No overwriting should be done.

III. Multiple Choice Questions:

(20 x 1 = 20)

1. The property of specificity of nerve fibers for transmitting only one modality of sensation is called
 - A) Law of Projection.
 - B) Spatial Summation.
 - C) Labeled Line Principle.
 - D) Weber Fechner Law.

2. The hypothalamic nucleus that controls food intake called as feeding center is
 - A) Lateral Hypothalamus.
 - B) Posterior Hypothalamus.
 - C) Anterior Hypothalamus.
 - D) Ventro Medial Nucleus.

3. The intrafusal fibers of muscle spindle is supplied by
 - A) Alpha Motor Neuron.
 - B) Gamma Motor Neuron.
 - C) Dorsal Root Neuron.
 - D) Renshaw Cell.

4. The neurotransmitter that is excitatory is
 - A) Glycine.
 - B) Glutamate.
 - C) Serotonin.
 - D) Dopamine.

5. In which stage of sleep, sleep spindles and K^+ complexes are seen in EEG
 - A) REM Sleep.
 - B) Stage – 2 NREM Sleep.
 - C) Stage – 4 NREM Sleep.
 - D) Stage – 3 NREM Sleep.

6. The increase in heart rate following an increase in Atrial pressure is called as
- A) Cushing's Reflex.
 - B) Volume Reflex.
 - C) Bain Bridge Reflex.
 - D) Baroreceptor Reflex.
7. The substance that can cause vasodilatation of blood vessel is
- A) Norepinephrine.
 - B) Angiotensin II.
 - C) Vasopressin.
 - D) Bradykinin.
8. Tall and tented 'T' waves in Electro Cardiogram is seen in
- A) Hypocalcemia.
 - B) Hypokalemia.
 - C) Hyponatremia.
 - D) Hyperkalemia.
9. The condition that causes low cardiac output is
- A) Anemia.
 - B) Beriberi.
 - C) Arteriovenous Fistula.
 - D) Valvular Heart Disease.
10. The tastant which has got highest threshold is
- A) Hydrochloric Acid.
 - B) Strychnine Hydrochloride.
 - C) Sucrose.
 - D) Glucose.
11. Counter irritants allays pain by
- A) Spatial Summation.
 - B) Adaptation of Receptors.
 - C) Inhibition of pain pathway at dorsal horn gate.
 - D) Inhibiting the release of pain mediators.
12. Pure word blindness occurs in lesion of
- A) Superior Temporal Gyrus.
 - B) Inferior Temporal Gyrus.
 - C) Middle Temporal Gyrus.
 - D) Angular Gyrus.
13. The following is TRUE regarding the surfactant lining the alveoli
- A) Is produced by alveolar type I cells and secreted into the alveolus.
 - B) Helps to prevent alveolar collapse.
 - C) Is increased in the lungs of heavy smokers.
 - D) Is a glycolipid complex.

14. Spontaneous respiration ceases after
- A) Transection of the brainstem above the pons.
 - B) Transection of the brainstem at the caudal end of the medulla.
 - C) Bilateral Vagotomy.
 - D) Bilateral vagotomy combined with transection of the brainstem at the superior border of the pons.
15. The pacemaker cells initiating rhythmic respiration located in medulla responsible for normal respiration is
- A) Apneustic Center.
 - B) Pneumotaxic Center.
 - C) Pre Botzinger Complex.
 - D) Nucleus Tractus Solitarius.
16. Shifting of O₂ – Hemoglobin curve to right means
- A) Decreased O₂ delivery to tissues.
 - B) Increased O₂ delivery to tissues.
 - C) Loading of CO₂ to blood.
 - D) Loading of O₂ to blood.
17. Which of the following sensation is carried by the lateral spinothalamic tract?
- A) Crude touch and fine touch.
 - B) Tactile localization and discrimination.
 - C) Vibration and proprioception.
 - D) Pain and temperature.
18. The diffusion of ions that causes inhibitory post synaptic potential is
- A) Increased conductance of sodium ions.
 - B) Increased conductance of potassium ions.
 - C) Decreased conductance of potassium ions.
 - D) Decreased conductance of chloride ions.
19. Renshaw cell inhibition is an example of
- A) Positive feedback inhibition.
 - B) Negative feedback inhibition.
 - C) Feedforward inhibition.
 - D) Postsynaptic inhibition.
20. The auditory pathway passes via all EXCEPT
- A) Cochlear nuclei.
 - B) Superior olivary nucleus.
 - C) Trapezoid body.
 - D) Superior colliculus.

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1. The neurological cell that has specific function of forming myelin is
 - A) Microglia.
 - B) Astrocytes.
 - C) Ependymal cells.
 - D) Oligodendrocyte.

2. The most potent stimulus for central chemoreceptors in regulating respiration is
 - A) Increased CO_2 Concentration.
 - B) Decreased O_2 Concentration.
 - C) Decreased Na^+ and K^+ Concentration.
 - D) Increased HCO_3^- Concentration.

3. The respiratory centre which acts as a off switch point is
 - A) Apneustic Center
 - B) Pneumotaxic Center
 - C) Dorsal group of Nervous.
 - D) Ventral group of Nervous.

4. Spirometry measures all EXCEPT
 - A) Vital capacity.
 - B) Inspiratory Reserve Volume.
 - C) Functional Residual Capacity.
 - D) Expiratory Reserve Volume.

5. The 'a' wave in jugular venous pulse tracing is due to
 - A) Atrial Systole.
 - B) Atrial Diastole.
 - C) Ventricular Diastole.
 - D) Ventricular Systole.

6. Preload of the heart is determined by
- A) End Diastolic Volume.
 - B) End Systolic Volume.
 - C) Ejection Systolic Volume.
 - D) Systolic Vascular Resistance.
7. Golgi tendon organ determines
- A) Static Length.
 - B) Muscle Action.
 - C) Muscle Tension.
 - D) Dynamic Length.
8. Athetosis is characterized by
- A) Continuous, slow writing movements.
 - B) Rapid voluntary dancing movement.
 - C) Involuntary flailing movements.
 - D) Slowness of movements.
9. The language comprehension area in posterior part of the superior gyrus of temporal lobe is
- A) Broca's Area.
 - B) Wernicke's Area.
 - C) Gnostic Area.
 - D) Angular Gyrus.
10. The nucleus responsible for maintaining circadian rhythm is
- A) Subthalamic Nucleus.
 - B) Suprachiasmatic Nucleus.
 - C) Raphe Nucleus.
 - D) Lateral reticular Nucleus.
11. Brown-Sequard Syndrome is characterized by all the following EXCEPT
- A) Loss of vibration sense on the opposite side below level of the lesion.
 - B) Loss of voluntary movements on the same side below the level of the lesion.
 - C) Loss of reflex movements on the same side at the level of the lesion.
 - D) Loss of pain sensation on the opposite side below the level of the lesion.
12. The lateral motor system of the cord is formed by following tracts
- A) Vestibulospinal and Olivospinal.
 - B) Reticulo spinal and Rubrospinal.
 - C) Cortico spinal and Rubrospinal.
 - D) Vestibulospinal and Reticulospinal
13. The afferent climbing fibers to the cerebellum originate from
- A) Superior Olivary Nucleus.
 - B) Inferior Olivary Nucleus.
 - C) Superior Vestibular Nucleus.
 - D) Inferior Vestibular Nucleus.

14. Which of the following part of the eye has the greatest concentration of rods
- A) Iris.
 - B) Optic disc.
 - C) Fovea.
 - D) Parafoveal Region.
15. Taste buds are absent in
- A) Fungiform Papillae.
 - B) Filiform Papillae.
 - C) Foliate Papillae.
 - D) Circumvallate Papillae.
16. Sympathetic stimulation of the bronchus causes
- A) Bronchial Constriction.
 - B) Increased secretion from glands.
 - C) No effect.
 - D) Bronchial dilatation.
17. Which of the following changes would tend to cause accumulation of fluid (oedema) in the tissues?
- A) Increased pre capillary vascular resistance.
 - B) Decreased post capillary vascular resistance.
 - C) Increased plasma colloid osmotic pressure.
 - D) Increased venous pressure.
18. The most powerful stimulus to initiate CNS ischemic response is
- A) CO₂ accumulation in the medulla.
 - B) Fall in arterial PO₂.
 - C) Rise in arterial PCO₂.
 - D) Fall in the blood pH.
19. True about pain pathway is
- A) These are myelinated A β afferent neurons.
 - B) Glutamic acid and substance P are the transmitters released at synapse.
 - C) Nociceptors are rapidly adapting.
 - D) Pain sensation is carried by anterior spinothalamic tract.
20. Muscle spindle is
- A) Receptor for a variety of multi synaptic reflex.
 - B) Receptor for stretch reflex.
 - C) Occurs only in antigravity muscles.
 - D) Excited by both stretch and contraction of the muscles in which it is located.

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1. Which of the following is inhibitory to vaso motor area,
 - A. Pain pathways
 - B. Baro receptors
 - C. Chemo receptors
 - D. All of the above

2. Sympathetic stimulation of heart causes all except,
 - A. Increased refractory period
 - B. Decreased refractory period
 - C. Positive chronotropism
 - D. Positive inotropism

3. Last ditch stand is
 - A. Brain bridge reflex
 - B. Mary's reflex
 - C. CNS ischaemic response
 - D. Triple response

4. 3rd heart sound is due to
 - A. Closure of semilunar valves
 - B. Rapid filling of ventricles
 - C. Atrio-ventricular valves closure
 - D. Atrial systole

5. The following antibody is found in lungs,
 - A. IgD
 - B. IgA
 - C. IgM
 - D. IgG

6. Vagal stimulation causes increase in,
 - A. Heart rate
 - B. R-R interval in ECG
 - C. Cardiac output
 - D. Force of contraction

7. Flow in small airways is laminar because,
 - A. Reynolds number in small airways is more than 2000
 - B. Cross-sectional area in small airways is small
 - C. The diameter of these airways is small
 - D. The linear velocity of airflow in small air ways is extremely low

8. Stability of alveoli is maintained by,
 - A. Residual air
 - B. Increased surface areaby surfactant
 - C. Negative intra pleural pressure
 - D. Lung compliance

9. Apex of the lung are predisposed to tuberculosis because the alveolar air there has ,
 - A. Increased PCO_2
 - B. Increased PO_2
 - C. Decreased PCO_2
 - D. Deceased PO_2

10. In bends disease the gas responsible for the pathological effects is,
 - A. O_2
 - B. CO_2
 - C. Helium
 - D. Nitrogen

11. The chemical responsible for causing more pain following a tissue damage is,
 - A. Opioids
 - B. Ischaemia
 - C. Bradykinin
 - D. Substance P

12. Parkinson's disease is characterised by the following triad,
 - A. Hypokinesia, rigidity, tremors
 - B. Rigidity , tremors, nystagmus
 - C. Flaccidity, intentional tremors , ataxia
 - D. Rigidity, hypokinesia , dysarthria

13. Hunger centre is ,
 - A. Ventro-medial nucleus of thalamus
 - B. Lateral hypothalamic nucleus
 - C. Anterior hypothalamic nucleus
 - D. posterior hypothalamic nucleus

14. If the patient survives stage of spinal shock, the following activity is regained first,
- A. Skeletal muscle activity
 - B. Smooth muscle activity
 - C. Sympathetic tone
 - D. Reflex activity
15. CSF pressure is
- A. 120-180 mm of water
 - B. 120-180 mm of Hg
 - C. 80-100 mm of water
 - D. 80-100 mm of Hg
16. All of the following are features of LMN lesion except,
- A. Flaccid paralysis
 - B. Exaggerated deep reflexes
 - C. Babinski's sign negative
 - D. Muscle wasting
17. Refractive index of cornea is,
- A. 1.37
 - B. 1.33
 - C. 1.42
 - D. 1.39
18. Helicotrema is a communication between,
- A. Cochlea and semi-circular canal
 - B. Vestibule and semi-circular canal
 - C. Scala vestibuli and scala tympani
 - D. Scala media and cochlea
19. The Refractive error which occurs in elderly people is
- A. Myopia.
 - B. Astigmatism.
 - C. Hypermetropia.
 - D. Presbyopia.
20. The receptors for hearing is
- A. Ear ossicles.
 - B. Saccule .
 - C. Utricle.
 - D. Haircells in cochlea.

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

[MBBS 0522]

MAY 2022

Sub.Code : 6054

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

FIRST YEAR – SUPPLEMENTARY (CBME)

PAPER II – PHYSIOLOGY

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1. Bradycardia caused by all except
 - A. Inspiration
 - B. Nor epinephrine
 - C. Increased intracranial pressure
 - D. Grief
2. All of the following compounds act as vasoconstrictor except
 - A. Angiotensin II
 - B. Thromboxane A₂
 - C. Prostacyclin
 - D. Endothelin
3. Total cross sectional area is greater in
 - A. Artery
 - B. Arteriole
 - C. Capillaries
 - D. Venules
4. Ventilation perfusion ratio is
 - A. Low at the apex and high at the base
 - B. Low at both apex and base
 - C. High at apex and low at base
 - D. High at both apex and base
5. The normal pleural pressure at the beginning of inspiration is
 - A. 5 cms of H₂O
 - B. 1 cms of H₂O
 - C. -5 cms of H₂O
 - D. -10 cms of H₂O

6. J receptors was discovered by
- Claude Bernard
 - Galen
 - Singer & Nicolson
 - A.S.Paintal
7. All of the following relay in thalamus except
- Pain
 - Temperature
 - Olfaction
 - Taste
8. Neurotransmitter responsible for pre synaptic inhibition is
- Glycine
 - Glutamic acid
 - Serotonin
 - GABA
9. Which part of the brain principally stores memory
- Amygdala
 - Hippocampus
 - Neocortex
 - Uncus
10. Hypothalamus regulates all except
- Food intake
 - Motor activity
 - Circadian Rhythm
 - Hypophysiscerebri
11. The low intensity light during night is detected by
- Cones
 - Rods
 - Both cones and rods
 - Crystalline lens
12. Which part of the eye is responsible for control of the amount of light entering the eye
- Lens
 - Iris
 - Ciliary muscle
 - All of the above
13. The part of the ear where sound is transduced is
- Outer ear
 - Tympanic membrane
 - Semicircular canals
 - Cochlea

14. The part of the eye which transduces blue, green and red light is
- Cornea
 - Fovea
 - Periphery of retina
 - Optic nerve
15. All are causes of obstructive shock except
- Cardiac tamponade
 - Pulmonary embolism
 - Tension Pneumothorax
 - Myocardial infarction
16. Caisson`s disease is due to:
- Increased arterial PO_2
 - Increased arterial PCO_2
 - Increased arterial PN_2
 - All of the above
17. In athletes bradycardia is because of
- Increased sympathetic tone
 - Increased vagal tone
 - Decreased cardiac output
 - Low venous return
18. Prominent U-Waves may be seen with:
- Hyperkalemia
 - Hypokalemia
 - Hyponatremia
 - Hypernatremia
19. All are monosynaptic reflexes except:
- Knee reflex
 - Biceps reflex
 - Ankle reflex
 - Abdominal reflex
20. Sympathetic postganglionic fibres to sweat glands and piloerector muscle secrete:
- Epinephrine
 - Norepinephrine
 - Acetylcholine
 - Serotonin

[MBBS 0522]

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

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Answer All Questions

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III. Multiple Choice Questions:

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- Heart rate in atrial flutter is about
A) 95 – 150 beats B) 100 – 175 beats C) 200 – 350 beats D) >350 beats
- “Last ditch stand” pressure control mechanism is by
A) Baroreceptor reflex B) Chemoreceptor reflex
C) CNS ischemic response D) Atrial reflex
- 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
- “Machinery murmur” is heard in
A) Tetralogy of Fallot B) Patent ductus arteriosus
C) Ventricular septal defect D) Atrial septal defect
- 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
- Measurement of lung volumes with a body plethysmograph uses
A) Dalton’s law B) Henry’s law C) Boyle’s law D) Graham’s law
- 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
- 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 Ia fibres 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) Purkinje cells C) Stellate cells D) Basket cells
17. Normal CSF pressure when a person is lying in horizontal position averages
A) 100 mm of H₂O B) 90 mm of H₂O C) 130 mm of H₂O D) 200 mm of H₂O
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.

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

[MBBS 0323]

MARCH 2023

Sub. Code : 6054

M.B.B.S. DEGREE EXAMINATION
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- Hypoxia produces vasoconstriction in the
A) Muscles B) Liver C) Lungs D) Spleen
- Which of the following type of breathing occurs in diabetic ketoacidosis?
A) Apneustic breathing B) Biot's breathing
C) Kussmaul's breathing D) Cheyne – Stokes breathing
- Breathing reserve is equal to
A) Tidal volume X respiratory rate
B) Maximum breathing capacity – Respiratory minute volume
C) Maximum breathing capacity – Dead space
D) Respiratory minute volume – Tidal volume
- Carbon dioxide is mainly transported as
A) Dissolved form B) Bicarbonate form
C) Carbaminohemoglobin D) Carbaminoprotein
- The volume of air that remains in the lungs at the end of maximum expiration is called as
A) Functional residual capacity B) Vital capacity
C) Residual volume D) Tidal volume
- Which of the following is a vasodilator?
A) Endothelin B) Norepinephrine C) Vasopressin D) Bradykinin
- Windkessel effect is seen in
A) Aorta B) Inferior vena cava C) Capillaries D) Lymphatics
- Which one of the followings is the most powerful cardioaccelerator and vasoconstrictor?
A) Baroreceptor reflex B) Chemoreceptor reflex
C) Bain bridge reflex D) CNS ischemic response
- The blood pressure below which the vessels collapse and blood flow ceases is
A) Critical closing pressure B) Mean circulatory filling pressure
C) Mean systemic filling pressure D) Mean arterial pressure

10. Delay in impulse conduction in the heart occurs at
A) SA node B) AV node C) Bundle of His D) Purkinji fibres
11. Nociceptive stimuli are detected by
A) Pacinian corpuscle B) Merkel's disc C) Free nerve ending D) Ruffini end organ
12. Posterior column carries all sensations except
A) Vibration B) Fine touch C) Itch and tickle D) Position sense
13. Which of the following occurs after parasympathetic stimulation?
A) Dilation of bronchi B) Contraction of detrusor
C) Dilation of pupil D) Ejaculation
14. Which of the following is negative memory?
A) Habituation B) Sensitization C) Consolidation D) Long term potentiation
15. Planning of sequential movements occurs at
A) Vestibulocerebellum B) Spinocerebellum
C) Cerebrocerebellum D) Flocculonodular lobe
16. The 'positive' apnea test indicates
A) Breath holding B) Brain death C) Deglutition apnea D) Obstructive sleep apnea
17. Artificial hypothermia is induced in
A) Heat stroke B) Heart surgeries C) Frostbite D) Fever
18. When light falls on rods, the rods undergo
A) Depolarization B) Hyperpolarisation C) Repolarisation D) Spike potential
19. In which nucleus of thalamus, taste fibers relay?
A) Ventral posterolateral nucleus B) Anterior nucleus
C) Midline intra laminar nucleus D) Ventral posteromedial nucleus
20. Thermostatic body temperature control center is located in the
A) Preoptic area of hypothalamus B) Lateral hypothalamus
C) Organum vasculosum of lamina terminalis D) Ventromedial nucleus.

[MBBS 0323]

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

[MBBS 1123]

NOVEMBER 2023

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- Prepotential is due to:
A) Voltage gated sodium channels
B) Delayed closure of potassium channels
C) Long lasting calcium channels
D) None of the above
- _____ acts as a primer pump.
A) Atria
B) Ventricles
C) Bundle of His
D) Purkinje fibers
- Cardiotachometer is an instrument used to diagnose
A) Sinoatrial block
B) Sinus arrhythmia
C) Premature ventricular contraction
D) Premature atrial contraction
- The phenomenon of “Overdrive suppression” is seen in
A) Stokes Adam’s syndrome
B) Wolf Parkinson White syndrome
C) William’s syndrome
D) Noonan syndrome
- Significance of Reynolds number (Re) is to
A) Regulate BP
B) Regulate speed of blood flow
C) Determine turbulence in blood flow
D) Regulate respiration
- In cystic fibrosis, Repeated Pulmonary infections occurs due to
A) Streptococcus pneumonia
B) Escherchia Coli
C) Pseudomonas aeruginosa
D) Klebsiella pneumonia
- Factors that shift the Oxygen Dissociation Curve to Right
A) Decreased CO₂
B) Decreased temperature
C) Increased 2,3 BPG
D) Decreased hydrogen ion
- Biot’s breathing occurs due to
A) Lesion in Medulla oblongata
B) Severe cardiac failure
C) Diabetic Ketoacidosis
D) Lesion in Pons

9. Cyanide poisoning causes death due to
A) Respiratory depression B) Brainstem depression
C) Destruction of cytochrome oxidase D) Circulatory collapse
10. Dyspnea occurs at rest, when Dyspnoeic Index is reduced to
A) < 80% B) <90% C) <60% D) <70%
11. Type of fibre responsible for carrying motor signals to muscle spindle
A) A α B) A β C) A γ D) A δ
12. Types of muscarinic cholinergic receptors present in CNS are
A) M₁, M₄, M₅ receptors B) M₂, M₄, M₅ receptors
C) M₃, M₄, M₅ receptors D) M₁, M₂, M₄ receptors
13. A receptor that never fully adapts is
A) Pacinian corpuscle B) Meissner corpuscle
C) Ruffini corpuscles D) Baroreceptors
14. Corticospinal and corticobulbar tract neurons are located in _____ of cerebral cortex
A) Layer III B) Layer IV C) Layer V D) Layer I
15. Herpes virus infects _____.
A) Dorsal root ganglion B) Otic ganglion
C) Pterygopalatine ganglion D) Ciliary ganglion
16. The rate of impulses generated from the vestibular hair cells in resting condition is
A) 200/sec B) 100/sec C) 300/sec D) 400/sec
17. Higher intellectual functions are linked to
A) Limbic system B) Parietal lobe C) Prefrontal cortex D) Motor cortex
18. Distorted sense of smell is called as
A) Apraxia B) Anosmia C) Parosmia D) Ageusia
19. Other name for Reissner Membrane
A) Basilar membrane B) Vestibular membrane
C) Tympanic membrane D) Tectorial membrane
20. Loss of accommodation in old age is called
A) Myopia B) Cataract C) Emmetropia D) Presbyopia.

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

[MBBS 0124]

JANUARY 2024

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M.B.B.S. DEGREE EXAMINATION

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(20 x 1 = 20)

1. Wave that is seen in old recovered Myocardial Infarction is
 - A) Prominent Q wave
 - B) Prominent T wave
 - C) Prominent P wave
 - D) Prominent R wave
2. Which is called “pressure buffer system”
 - A) Baroreceptor system
 - B) Chemoreceptor system
 - C) Both a and b
 - D) None of the above
3. 80% of the total colloid osmotic pressure of plasma results from _____
 - A) Fibrinogen
 - B) Albumin
 - C) Globulin
 - D) Prothrombin
4. Most common site of myocardial infarction is _____
 - A) Subendocardial portion of left ventricle
 - B) Subendocardial portion of right ventricle
 - C) Interventricular septum
 - D) Right atrium
5. Sympathomimetic drugs have not proved to be beneficial in
 - A) Neurogenic shock
 - B) Haemorrhagic shock
 - C) Anaphylactic shock
 - D) None of the above
6. Functional residual capacity is
 - A) Volume remaining after forced expiration
 - B) Tidal volume + volume inspired forcefully
 - C) Volume remaining after normal respiration
 - D) Tidal volume + volume expired by forced expiration
7. Airway resistance
 - A) is increased if the lungs are removed and inflated with saline
 - B) does not affect the work of breathing
 - C) is increased in paraplegic patients
 - D) is increased following bronchial smooth muscle contraction

8. Which of the following has the greatest effect on the ability of blood to transport oxygen?
A) Capacity of the blood to dissolve oxygen B) Amount of hemoglobin in the blood
C) Temperature of the blood D) pH of plasma
9. Variations in which of the following components do not affect respiration?
A) Arterial HCO₃⁻ concentration B) Arterial H⁺ concentration
C) Arterial Na⁺ concentration D) CSF H⁺ concentration
10. Which serves as Progenitor cells after injury in lungs?
A) Type 1 alveolar cells B) Clara cells (club cells)
C) Type 2 alveolar cells D) Lamellar bodies
11. Botulinum toxin A and E act on _____ docking protein
A) Syntaxin B) SNAP – 25 C) Synaptobrevin D) α-SNAP
12. Brown-Séquard syndrome occurs due to
A) Complete transection of spinal cord B) Injury to the brainstem
C) Hemi section of spinal cord D) Transection between pons and medulla
13. Which substance activates adrenergic alpha and beta receptors equally?
A) Acetylcholine B) Norepinephrine C) Epinephrine D) Serotonin
14. Bilateral removal of hippocampus will lead to
A) Anterograde amnesia B) Retrograde amnesia C) Placidity D) Tameness
15. Appearance of sleep spindles in EEG represents
A) REM sleep B) Stage I sleep C) Stage II sleep D) Stage III sleep
16. Final common pathway is exhibited by
A) Gamma motor neuron B) Gamma loop
C) Alpha motor neuron D) Alpha – Gamma coactivation
17. Area essential for initial processing of visual language
A) Broca's area B) Wernicke's area C) Arcuate fasciculus D) Angular gyrus
18. Endolymph is present in
A) Scala media B) Scala vestibule C) Scala tympani D) Oval window
19. Taste threshold is lowest in which of the following substances
A) Bitter B) Salt C) Sour D) Sweet
20. Colour blobs are present in
A) Parietal cortex B) Frontal cortex C) Visual cortex D) Auditory cortex
