



Date of issue : Centre :

Sup. Sign. : Seat No. :

ND-2006000101020001-O Seat No. _____

First Year M. B. B. S. Examination

January - 2022

Physiology : Paper - 1

Time : Hours [Total Marks : 20]

Instruction :

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Fill up strictly the details of signs on your answer book.

Name of the Examination :

First Year M. B. B. S.

Name of the Subject :

Physiology : Paper - 1

Section No. (1, 2,) :

Subject Code No. :

2 0 0 6 0 0 0 1 0 1 0 2 0 0 0 1

Seat No. :

Student's Signature

Section A MCQs 20 marks

- The phospholipid seen mostly on the outer leaflet of cell membrane is
 - Phosphatidylethanolamine
 - Phosphatidylserine
 - Phosphatidylcholine
 - Phosphatidylinositol
- Fluidity of the lipid bilayer cell membrane is decreased by Decreasing the cell membrane concentration of
 - the unsaturated fatty acids
 - transmembrane protein
 - the saturated fatty acids
 - glycoprotein
- Hemostasis refers to the
 - unwavering control of a physiological set point
 - maintaining a stable internal environment
 - maintaining a stable external environment
 - coagulation of blood

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4. Blood does not coagulate inside the body due to the presence of-

- a) Fibrin
- b) Heparin
- c) Hemoglobin
- d) Thromboplastin

5. The region of the sarcomere which contains thick filaments is

- a) M Line
- b) Z Line
- c) I Band
- d) A Band

6. In skeletal muscle myosin head binding site on actin is covered by

- a) Troponin I
- b) Tropomyosin
- c) Troponin C
- d) Titin

7. During the contraction of a skeletal muscle fiber, the actin and myosin filaments slide past each other. Which of the following represents expected changes in the widths of I bands and A-bands during the contraction process?

- | I Band Width | A Band Width |
|--------------|--------------|
| a. Increase | No Change |
| b. Decrease | Increase |
| c. No Change | Increase |
| d. Decrease | No Change |

8. Smooth muscle differs from skeletal muscle by

- a) Highly developed sarcoplasmic reticulum
- b) Lesser duration of contraction
- c) Role of extracellular calcium in contraction
- d) More number of mitochondria

9. In rapid repolarization of ventricular muscle fibres

- a) Slow calcium channels close & slow potassium channels open
- b) Fast sodium channels close & fast potassium channels open
- c) Slow calcium channels open & fast potassium channels close
- d) Fast sodium channels close & fast calcium channels open

10. Which of the following pathway begins at the anterior portion of SA node and ends at AV node

- a) Internodal pathway of Wenkebach
- b) Internodal pathway of Bachman
- c) Internodal pathway of Thorel
- d) Bundle of Kent

11. Warm and red skin is seen in

- a) Constricted arterioles and capillaries
- b) Dilated arterioles and capillaries
- c) Constricted arterioles and capillaries
- d) Only dilated capillaries

12. During which phase of cardiac action potential, the inward rectifier potassium current is observed
- a) Initial rapid repolarisation
 - b) Plateau
 - c) Final repolarisation
 - d) Depolarisation

13. Which of the following organ disorder is least likely to result in steatorrhea
- a) Liver
 - b) Small Intestine
 - c) Pancreas
 - d) stomach

14. The mitotically active, undifferentiated cells that replenish Enterocytes, are located in
- a) Brunner's gland
 - b) Crypts of Lieberkuhn
 - c) Peyer's patches
 - d) Gut associated lymphoid tissue

15. Intrinsic factor of Castle is secreted by
- a) Chief cells
 - b) Parietal cells
 - c) G cells
 - d) S cells

16. Which of the following can result in gastric ulcer by damaging the mucosal barrier and increasing acid secretion
- a) Gastrin
 - b) H. Pylori
 - c) Bile salts
 - d) Epidermal growth factor

17. Most of the work during tidal inspiration is done by
- a) Diaphragm
 - b) External intercostals muscles
 - c) Internal intercostals muscles
 - d) Sternocleidomastoid muscles

18. Surfactant helps to

- a) Lower the surface tension
- b) Bring about the closure of the alveoli
- c) Relax the bronchial wall
- d) Increase the work of breathing

19. Most of the resistance to the renal blood flow is offered by

- a) Efferent arterioles
- b) afferent arterioles
- c) Peritubular capillaries
- d) renal vein

20. The first micturition reflex is initiated at the urine volume of ___ in urinary bladder
- a) 50 ml
 - b) 150 ml
 - c) 250 ml
 - d) 350 ml