



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 :

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup 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,.....): Nil

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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[Contd...

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