RAN-2006000101020001

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First M.B.B.S. Examination

January - 2021

Physiology (New - CBME)

Time: 3 Hours] **[Total Marks: 100**

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:
☛ **First M.B.B.S.**

Name of the Subject :
☛ **Physiology (New - CBME)**

Subject Code No.: **2006000101020001**

Seat No.:

Student's Signature

(2) All the sections are compulsory.

(3) Each section must be answered in separate sheets.

(4) Each question must be answered relevantly, precisely and to the point.

SECTION A

Q-1 Multiple choice question (no negative marking) **20**

1. Most of the body fluid is present in

   A. ECF compartment B. ICF compartment

   C. Transcellular compartment D. Intravascular compartment

2. Salt solution isotonic to plasma is

   A. 0.65% B. 0.9%

   C. 1% D. 5%

3. Which organelle of the cell is concern with oxidation ?

   A. Mitochondria
   B. Golgi apparatus
   C. Lysosomes
   D. Ribosomes

4. Plasma albumin

   A. Is the smallest molecule of all proteins
   B. Contributes to the colloidal osmotic pressure
   C. It is involved in the transport of hormones
   D. All of the above

5. Normal RBC synthesis requires

   A. Iron
   B. Copper
   C. Vitamin B12
   D. All of the above

6. Neutrophil leucocytes

   A. Have the life span of 120 days
   B. Liberates bilirubin when the die out
   C. A & B are incorrect
   D. A & B are correct

7. One molecule of hemoglobin is composed of

   A. One of the Heam & four of Globin
   B. Four of the Heam & one of the Globin
   C. Two of the Heam & two of the Globin
   D. Three of the Heam & one of Globin

8. 90% of the carbon dioxide in the blood is carried as

   A. Bicarbonate ion
   B. Dissolved CO_2
   C. Carbonic acid
   D. Free CO_2

9. Cyanosis can be clinically not seen if hemoglobin concentration is

A. 5 gm% B. 8 gm%

C. 12 gm% D. 17gm%

10. Force of contraction of cardiac muscle

A. Not affected by nutrition

B. Decreases by athletic training

C. Increases with sympathetic stimulation

D. All of the above

11. Second heart sound differs from first heart sound in that

A. It is due to closure of semilunar valve

B. It has a split

C. S_2 is better auscultated in the basal area than apex

D. All of the above

12. Process of repolarization in the ECG is demonstrated by

A. T wave B. Q wave

C. P wave D. R wave

13. Mean arterial pressure is

A. Average of SBP and DBP

B. Diastolic pressure + 1/3 pulse pressure

C. Systolic pressure + 1/3 pulse pressure

D. None of the above

14. Which of the following causes arteriolar dilatation?

A. Decrease in PH B. Increase in local temperature

C. Increase O_2 tension D. Stimulation of Chemoreceptors

15. Electrical stimulation of Pneumotaxic center leads to

A. Accelerated respiration
B. Apnea
C. Forceful expiration
D. None of the above

16. In obstructive lung diseases, the following statement is false

A. FVC is reduced
B. FEV_1 is decreased
C. Residual volume is increased
D. FRC is decreased

17. Carbohydrate in the small intestine are digested by following enzymes except

A. Lactase
B. Sucrose
C. Ptyalin
D. Maltase

18. Gastric emptying time is maximum for the diet

A. Proteins
B. Carbohydrates
C. Fats
D. Fluid

19. Juxtamedullary nephrons

A. Have longer loop of Henle
B. Less than 40% of total nephron
C. A & B are incorrect
D. A & B are correct

20. Pressure volume relationship in urinary bladder can be studied by

A. Pilogram
B. Cystometrogram
C. Cystoscopy
D. None of the above

SECTION B

Q-2 Enlist the steps of hemostasis. Enumerate coagulation factors. Describe the coagulation pathways in detail. Name various anticoagulants used in vivo and in vitro. **1+2+5+2**

Q-3 **Answer in short (any 5)** **15**

a. Non respiratory functions of lungs

b. Lung compliance

c. Bohr's effect

d. Types of Hypoxia

e. Factors affecting diffusion

f. Vital capacity

Q-4 **Write short notes on (any 3)** **15**

a. Juxta glomerular apparatus

b. Distal convoluted tubules

c. Renin angiotensin aldosterone system (RAAS)

d. Functions of kidneys

SECTION C

Q-5 **Define following:** **3+5+2**

- ECG (Electrocardiogram)
- Einthoven Triangle
- Einthoven law

Draw and label normal ECG. What is the significance of various leads?

Q-6 Answer in short (any 5) 15

a. Stomach emptying

b. Functions of liver

c. Migrating motor complex

d. Bile salts and pigments

e. Composition and functions of salivary secretion

f. Stages of deglutition

Q-7 Write short notes on (any 3) 15

a. Rigor mortis

b. Myoproteins

c. Na-K-ATPase pump

d. Events at neuromuscular junction