

First Year MBBS Examination

I MBBS Physiology Paper 1

Time: 3 hours Max Marks: 50

Date: 12-06-2018

Instructions: 1. Answer to the points. 2. Figure to the right indicates marks. 3. Use separate answer books for each section. 4. Draw diagrams wherever necessary. 5. Write legibly.

Section 1

1. Write in detail: (any two) (10)
 - a. Homeostasis (A.38)
 - b. Genesis and propagation of Action potential
 - c. Neuromuscular transmission
 2. A. Write Short notes on (any two) (6)
 - a. Erythroblastosis fetalis
 - b. Functions of cell membrane (A.4) (8.9)
 - c. Physiologic basis of treatment of peptic ulcer (A.241) (8.477)
 2. B. Write Short notes on (any one) (3)
 - a. Nernst potential
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b. Osmosis and its applied importance (A.32)
(B.19)

3. Write Short notes on (any two) (6)

- a. Digestion and absorption of fats (A.294)
(8.514)
- b. Oxygen debt (A.752) (8.83)
- c. Anaemia and its classification

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Section 2

4. Explain in detail (any two) (10)
 - a. Define circulatory shock. Describe its types and stages and add a note on physiologic basis of its treatment (A.654) (8.284)
 - b. What is electrocardiogram (ECG)? Draw normal lead II ECG and label it. Enumerate uses of ECG.
 - c. Explain the mechanisms of inspiration and expiration giving the role of various muscles and pressure using suitable diagrams. (A.714) (8.297.316)

 5. A. Write briefly on (any two) (6)
 - a. Fick's law of diffusion of gases and its application in respiratory system (A.604) (B.216, 296)
 - b. Chemical regulation of respiration (A.720) (8.341)
 - c. Respiratory sinus arrhythmia

 5. B. Write briefly on (any one) (3)
 - a. What is ENS and how is it controlled by ANS? (ENS Enteric Nervous System)
 - b. Maintenance of body temperature in cold environment.

 6. Write answers in 2-3 sentences: (any six) (6)
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- a. Define homeostasis. Who gave this term?
(A.38)
- b. What is sarcomere and its role in body?
(A.171) (8.68,178)
- c. What is law of intestine?
- d. Enumerate types of cell junctions
- e. What is GAIN in a regulatory system?
- f. Give clinical importance of TPA (tissue plasminogen activator).
- g. What is Laplace law? Give one of its applied aspects
- h. What is the causes of pacemaker potential?
- i. Name the types of blood vessels.
- j. How does cutaneous vasoconstriction help in preventing heat loss?
