

FIRST YEAR BHMS (NEW SYLLABUS)
EXAMINATION AUGUST - 2016
PHYSIOLOGY- PAPER - I
Code-10194

Time: 3 hours

Total Marks:100

Instructions:

1. Attempt all questions from each section
2. Figures to the right indicate full.
3. Make suitable assumptions wherever necessary.
4. Write separate sections on separate answer sheets.

Section - I

- Q-1 Define arterial blood pressure. Types of arterial blood pressure. Describe regulation of blood pressure in detail. 10
- OR**
- Q-1 What are different types of leucocytes? Classify them. Describe morphology and functions of each one. 15
- Q-2 Define blood coagulation. Enumerate names of blood clotting factors. Explain intrinsic pathway of blood coagulation in detail. 15
- OR**
- Q-2 1. Describe structure and functions of lymph node. 07
2. Which are the properties of cardiac muscle? Describe any one in detail. 08
- Q-3 Write Short Note (Any three) 15
(a) antibody (b) draw and labelled diagram of normal ECG
(c) mitochondria (d) surface tension
(e) hemoglobin
- Q-4 M C Q 05
1. Rate diffusion of a substance from a region of its higher concentration to a region of lower concentration is directly proportional to;
 - a. molecular size of the substances
 - b. temperature
 - c. thickness of the membrane
 - d. water solubility of the substances
 2. Endoplasmic reticulum is associated with all of the following except;
 - a. enzymatic secretion
 - b. lipid secretion
 - c. glycogen synthesis
 - d. glycogenolysis
 3. Heart rate increases with inspiration, a phenomena called;
 - a. Mary's law
 - b. Cushing reflex
 - c. Sinus arrhythmia
 - d. Bainbridge reflex
 4. The conversion of fibrinogen in to fibrin occurs by;
 - a. Prothrombin
 - b. Thrombin
 - c. Thromboplastin
 - d. Platelets
 5. Eosinophilia is seen in except;
 - a. Bronchial asthma
 - b. Worms infestation
 - c. Cushing's syndrome
 - d. Urticarial

Section - II

Q-1 Draw and labelled structure of respiratory membrane. Describe the process of exchange of the gases through it. 15

OR

Q-1 Define nephron. Types of nephron. Give differences between of them. Describe reabsorption of water and sodium through PCT. 15

Q-2 Describe in detail physiology of micturition. 15

OR

Q-2 1. Describe helden's and bohr's effect in detail 08
2. Juxta glomerular apparatus 07

Q-3 Write Short Note (Any three) 15

(a) Nervous regulation of respiration (b) Pulmonary functions test

(c) Heat balance (d) counter current mechanism

(e) Saltatory conduction

Q-4 M C Q 05

1. 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

2. What is Haldane effect?

a. Loading of CO₂ to the blood causes unloading of O₂

b. Loading of O₂ to blood causes unloading of CO₂

c. Binding of CO to hemoglobin displaces O₂

d. Decreases in O₂ affinity of hemoglobin when PH of blood falls

3. The anterior hypothalamus is the center for responses to;

a. Rising body temperature

b. Falling body temperature

c. increased heat production

d. Decreased heat loss

4. Macula densa cells get stimulated by;

a. Hypovolemia

b. Decreased K⁺

c. Decreased Na⁺

d. Alteration in transmural pressure

5. At neuromuscular junction, one nerve fiber end on _____ motor end plate.

a. One

b. Three

c. Five

d. Many.