

**FIRST PROFESSIONAL B.H.M.S. EXAMINATION
HUMAN PHYSIOLOGY AND BIOCHEMISTRY PAPER - I
SUBJECT CODE: HOM UG-PB**

TIME: 3 HOURS

TOTAL MARKS: 100

- INSTRUCTIONS: 1. ATTEMPT ALL THE QUESTIONS.
2. DRAW DIAGRAMS WHEREVER NECESSARY.
3. FIGURES IN RIGHT INDICATES FULL MARKS

Q - 1 Multiple Choice Questions.**(10)**

- (1) The following statements are true about plasma membrane, except,

[A] Consist of bilayer of phospholipids	[B] Contain glycoproteins
[C] Is readily permeable to water	[D] Is readily permeable to ions
- (2) Genetic material is present in another organelle apart from nucleus

[A] Centrosome	[B] Lysosome
[C] Mitochondria	[D] Golgi apparatus
- (3) Decrease in colloid osmotic pressure leads to

[A] Dehydration	[B] Edema
[C] No change in body fluid	[D] Acidosis
- (4) The condition "Respiratory acidosis" means,

[A] Increase PCO_2	[B] Decrease PCO_2
[C] Increase serum Lactic acid	[D] Increase concentration of HCO_3^-
- (5) Which one of the following Ig has the largest concentration in serum

[A] Ig A	[B] Ig D
[C] Ig G	[D] Ig M
- (6) First heart sound is produced due to

[A] Closure of semilunar valve	[B] Closure of AV valve
[C] Opening of semilunar valve	[D] Opening of AV valve
- (7) Tidal volume in a normal man at rest is

[A] 0.5 L	[B] 2.0 L
[C] 1.0 L	[D] 1.5 L
- (8) Facultative reabsorption of water from renal tubules require,

[A] Oxytocin	[B] Aldosterone
[C] Cortisol	[D] ADH
- (9) Langerhans cell present in which layer of epidermis,

[A] Stratum corneum	[B] Stratum lucidum
[C] Stratum granulosum	[D] Stratum spinosum
- (10) Sarcomeres are present in

[A] Skeletal & cardiac muscle	[B] Smooth muscle
[C] Neuron	[D] Nephron

Q - 2 Write Short Answers

(40)

- (1) Endoplasmic reticulum
- (2) Osmosis
- (3) Innate immunity
- (4) ECG leads
- (5) Dead space
- (6) Juxtaglomerular apparatus
- (7) Function of skin
- (8) Sarcomere

Q - 3 Write Long Answers

(50)

1. Explain erythropoiesis in detail [Definition, Stages, Factors]
 2. Define haemostasis. which are the ways through haemostasis achieved?
Describe in detail platelet plug formation.
 3. Define cardiac cycle. Enumerate the different phases of a cardiac cycle.
Describe diastolic phase of cardiac cycle in detail.
 4. Describe in detail nervous regulation of the respiration.
 5. Define GFR. Its normal value. Explain factor affect the GFR.
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