MBBS: Physiology Paper 1 Part 1. ABVMUUP Paper Code: 211 11 30002

Q1. Define the Immunity. Explain the physiology of humoral and Cell-mediated Immune Response. Add a note on cytokines. (15+5)

Q2. Write short notes on :-

a) Primary and Secondary Active Transport (5)
b) Functions of Plasma Proteins (5)
c) Neuromuscular Junction (5)
d) Erythroblastosis foetalis (5)

Q3. Multiple choice questions (Each question caries 1 mark: Total 10 marks)

a. Erythropoietin level are increased by
A) ↓Hb. B) ↓pH. C) ↓PO2 D) ↓PCO2

b. Most diffusible ion in excitable tissue is :
A) Sodium. B) Potassium. C) Phosphate D) Chloride

c. Movement of substances prevented across intercellular space by
A) Zona adherens B) Zona occludens C) Gap junction D) Desmosome

d. Repolarization is due to opening of which channels:
A) Na. B) HCO3. C) Ca. D) Cl

e. Type C nerve fibre are;
A) Sensory B) Motor. C) Mixed. D) Any of above

f. Nissel bodies in neuron are:
A) Golgi apparatus B) Endoplasmic reticulum C) Mitochondria D) Lysosome

g. Active tension in muscle depends on :
A) Number of muscle fibres B) Number of motor units recruited
C). Aerobic capacity of muscle D) Length of muscle fibre

h. In cardiac muscle ,T tubules are present at :
A) Z lines. B) A lines C) I lines D) A-I junction

i. Cell motility is due to protein:
A) Motilin B) Tubulin C) Laminin D) Tactilin

j. Equilibrium potential for an ion is calculated by using:
A) Gibbbs –Donnnan equilibrium B) Nernst equation
C) Goldman equation. D) Donnan equilibrium

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Question 1: Explain the mechanism of HCL synthesis and secretion with well labelled diagram. Add a note on Acid peptic disease. (15+ 5 marks)

Question 2: Write short notes on- (5 marks each)

a) Glomerular Filtration Rate (GFR).
b) Surfactant
c) Migrating motor complex (MMC)
d) Endocrine Functions of Kidney

Question 3: MCQ (Each question carries 1 mark: total 10 marks)

a) Slow waves constituting the basal electrical rhythm:
   A) Are hyperpolarized by stretch, ACh, and gastrin.
   B) Occur at a consistent rate throughout the GI tract.
   C) Are undulations in the resting membrane potential resulting from Na+/K+ ATPase activity.
   D) Are absent in the colon

b) The migrating motor complex is triggered by which of the following?
   A) Motilin B) CCK C) Somatostatin D) Secretin

c) Most digestion occurs in
   A) The mouth B) The stomach C) The small intestine D) The large intestine

d) Micelles increase the absorption of fat by
   A) Binding the lipase enzyme and holding it on the surface of the lipid emulsion droplet.
   B) Keeping the insoluble products of fat digestion in small aggregates.
   C) Promoting direct absorption across the intestinal epithelium
   D) Facilitating absorption into the lacteals

e) In a normal person GFR at resting condition is
   A) 150 ml/min BB) 90 ml/min C) 60 ml/min D) 125 ml/min

f) Maximum absorption of water takes place in
   A) Loop of Henle B) Distal convoluted tubule
   C)Collecting duct D) Proximal convoluted tubule

g) Substance involved in countercurrent mechanism for maintaining medullary gradient
   A) NaCl, Urea, Water B) Urea C) NaCl, Urea D) NaCl

h) The principal site of acidification of urine is
   A)Proximal convoluted tubule B) Collecting duct
   C)Loop of Henle D) Distal convoluted tubule

i) Stability of alveoli is maintained by?
   A) Lung compliance. B) Negative intrapleural pressure
   C)Increase in alveolar surface area by the surfactant. D) Residual air in alveoli

j) Spontaneous rhythmic respiration initiated in:
   A) Pre-Botzinger complex B) Dorsal respiratory group
   C)Pneumotaxic center D) Apneustic center

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