

TIME : 3 Hrs

Note: Attempt all questions. Answer Part- I and Part - II in separate answer books. All part of a question should be answered together.

PART - I

PAPER CODE:

100

(1 × 2 + 4 × 4 = 15 Marks)

Q.1 Long Answer Question

Raju, a 45 year male came to hospital with complaints of tingling, numbness in lower limbs, recurrent ulcers in mouth and fatigue since three months. He is a pure vegetarian with normal bowel and bladder habits and no addiction. On examination, his skin was pale. There was sensory loss in extremities. On lab investigation his hemoglobin was 9 g%, and peripheral blood smear showed large cells and hypersegmented neutrophils. His mean corpuscular volume (MCV) was 108 fL, mean corpuscular hemoglobin (MCH) was 48 pg.

- What could be probable diagnosis
- Give reasons for the same
- Explain the mechanism for development of this disease
- Give the physiological basis of sign and symptoms
- Give function, absorption & metabolism of the substance responsible for the given condition.

Q.2 Short Notes Questions (within 500 words)

(3 × 5 = 15 Marks)

- Primary active transport
- Wallerian degeneration & regeneration
- Gastric emptying

Q.3 Short Answer Questions (within 100 words)

(5 × 2 = 10 Marks)

- Post-prandial alkaline tide
- Oxygen debt
- White and Red muscle fibers.
- Major cross matching
- Functions of gall bladder

4 Multiple Choice Questions

(10 × 1 = 10 Marks)

Substance used to measure extracellular fluid (ECF) compartment is:

- Deuterium oxide
- Evans blue dye
- Aminopyrine
- Sucrose

Which of the following is the most important choleragogue:

- Secretin
- CCK
- Gastrin
- Bile salts

Gap junctions are made up of proteins called :

- Clathrin
- Cadherin
- Connexin
- Calcineurin

Preganglionic parasympathetic nerve fibers are:

- Long and unmyelinated
- Short and unmyelinated
- Long and myelinated
- Short and myelinated

Repolarization of ventricular muscle:

- Occurs last at Apex
- Begins at AV node
- Begins in epicardium
- Begins in septum

2 Pancreatic juice rich in water and electrolyte and poor in enzyme is secreted in response to :

- Cholecystokinin
- Secretin
- Gastrin
- Pancreozymin

4 The ATPase activity of which of the following protein is altered to regulate skeletal muscle contraction:

- Myosin
- Actin
- Troponin
- Tropomyosin

6 Which coagulation factor is Vitamin K dependent:

- V
- VI
- VII
- VIII

8 Maximum potassium ion secretion is seen in :

- Saliva
- Gastric secretions
- Colonic secretions
- Jejunal secretions

10 In smooth muscle calcium calmodulin complex activates:

- Muscle phosphorylase
- Protein kinase
- Glucokinase
- 2,3 DPG