

POST GRADUATE EXAMINATION, APRIL - 2019

MD PHYSIOLOGY
(PAPER ONE)

GENERAL PHYSIOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagram.

- Q. 1. Give detail account of genesis of resting membrane potential (RMP) in a cell. (20)
- Q. 2. Discuss various defense mechanism of body and role of leucocytes in acute infection. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- a. Active transport across cell membrane
 - b. Role of kidney in regulation of acid base balance
 - c. Classification of anemia with a note on red blood cell indices
- Q. 4. Write short notes on: (5 x 6 = 30)
- a. Fibrinolytic system
 - b. Micturition reflex and cystometrogram
 - c. Student's t test
 - d. Apoptosis
 - e. Molecular motors

X

POST GRADUATE EXAMINATION, APRIL - 2019

**MD PHYSIOLOGY
(PAPER TWO)**

**CARDIOVASCULAR SYSTEM, RESPIRATORY SYSTEM, GIT & HEPATIC PHYSIOLOGY,
ENVIRONMENTAL & SPORTS PHYSIOLOGY, NUTRITION AND METABOLISM**

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagram.

Q. 1. Describe in detail cardiac output and its regulation. Add a note on various methods of cardiac output measurement. **(20)**

Q. 2. Describe neural regulation of respiration and different types of breathing. **(20)**

Q. 3. Describe briefly: **(3 x 10 = 30)**

- a. O₂ dissociation curve and factors influencing it. Add a note on P₅₀
- b. Types of skeletal muscle and endurance training
- c. Metabolic functions of liver and liver function tests

Q. 4. Write short notes on: **(5 x 6 = 30)**

- a. Hyperbarism and Caisson's disease
- b. Vitamin-D
- c. Body temperature regulation mechanisms
- d. Types of intestinal movements
- e. G-suite and its importance

X

POST GRADUATE EXAMINATION, APRIL - 2019

MD PHYSIOLOGY
(PAPER THREE)

CNS & SPECIAL SENSES, ENDOCRINE PHYSIOLOGY, REPRODUCTIVE PHYSIOLOGY,
NERVE-MUSCLE PHYSIOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagram.

Q. 1. Describe pain pathways and add a note on the endogenous pain control system. (20)

Q. 2. Describe the regulation of blood glucose. Discuss the pathophysiology of diabetes mellitus. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Electrical responses produced by rods and cones, explaining how these responses are produced
- b. Neuromuscular transmission and drugs affecting on NMJ
- c. Regulation of menstrual cycle

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Synthesis of thyroid hormones
- b. Excitation-contraction in smooth muscle
- c. Spermatogenesis
- d. Inverse stretch reflex
- e. Placental hormones

X

POST GRADUATE EXAMINATION, APRIL - 2019

**MD PHYSIOLOGY
(PAPER FOUR)**

RECENT ADVANCES IN ALL THE SYSTEMS

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagram.

Q. 1. Describe the importance of stem cells in our body. Elaborate on stem cell therapy. (20)

Q. 2. Describe the physiology of ageing. Add a note on factors reversing the age-related changes. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. Gene therapy
- b. Pineal gland
- c. Vagal control of mesenteric functions

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Nitric oxide
- b. Blood-brain-barrier
- a. CD4 and CD8 T lymphocytes
- c. Apoptosis
- d. Alzheimer's disease

X