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MD Physiology
EXAMINATION, MAY 2018

Paper First

GENERAL AND CELLULAR PHYSIOLOGY INCLUDING GENETIC BASIC HISTORICAL PERSPECTIVES.

Time: Three Hours] *[Maximum Marks: 100*

Note: Attempt all questions. Draw well labeled diagrams wherever necessary.

1. What is the principle underlying measurement of body fluid compartments? Discuss measurement & regulation of ECF volume. [20]

2. Describe ageing from the point of view of its cellular & molecular mechanisms that underline it. [20]

3. Write short notes on: [10x6]

a. Intercellular connections
b. Donnan effect
c. Recombinent DNA technology
d. Evoke potential
e. Contributions of B.K. Anand & Claude Bernard
f. Calmodulin

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Printed page (s): 1 Paper Code: MD-106

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MD Physiology
EXAMINATION, MAY 2018

Paper Second

SYSTEMIC PHYSIOLOGY (SYSTEM PROVIDING TRANSPORT, NUTRITION AND ENERGY INCLUDING COMPARATIVE PHYSIOLOGY)

Time: Three Hours] *[Maximum Marks: 100*

Note: Attempt all questions. Draw well labeled diagrams wherever necessary.

1. Describe Circulatory Dynamics of Cardiac Failure. Add a note on Congestive Heart Failure. [15+5=20]

2. Describe briefly : [10×2=20]

   a. Role of countercurrent mechanism in the concentration of urine
   b. Movements of small intestine

3. Describe the various static & dynamic lung volumes & capacities. Add a note on their clinical significance. [15+5=20]

4. Write briefly about – [10x4]
   a. Pulmonary surfactants
   b. Pulse wave velocity & its role in health & disease
   c. Pathophysiology & treatment of peptic ulcer
   d. Consequences of hyponatremia & hypernatremia

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MD Physiology
EXAMINATION, MAY 2018

Paper Third

SYSTEMIC PHYSIOLOGY (SYSTEM CONCERNED WITH PROCREATION, REGULATION AND NEURAL CONTROL)

Time: Three Hours] *[Maximum Marks: 100*

Note: Attempt all questions. Draw well labeled diagrams wherever necessary.

1. Discuss the role of various reflexes integrated at the levels of spinal cord & medulla in the regulation of posture & movement. [25]

2. Describe the phases of menstrual cycle. Explain various changes that occur in the uterus & ovaries during the cycle. Discuss its hormonal regulation. [25]

3. Enumerate the adrenal cortical hormones. Describe briefly the functions of glucocorticoids. [20]

4. Write short notes on: [10x3]
   a. Fetoplacental Unit
   b. Metabolic Syndrome
   c. Craniosacral autonomic outflow

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MD Physiology
EXAMINATION, MAY 2018

Paper Fourth

APPLIED PHYSIOLOGY INCLUDING RECENT ADVANCES.

Time: Three Hours] *[Maximum Marks: 100*

Note: Attempt all questions. Draw well labeled diagrams wherever necessary.

1. Discuss the pathophysiology of metabolic syndrome (MS).Explain the role of meditation in prevention/treatment of MS. [20]

2. Discuss the adipokines secreted by adipocytes. [20]

3. Write short notes on – [10x6]
   a. Brain stem auditory evoked potential .
   b. Age related changes in cardiovascular system
   c. Pathophysiology of pulmonary oedema at high altitude
   d. VO_2 max
   e. Hypothermia
   f. Student's 't' test.

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