

MD[Physiology]

BF/2009/05

General Physiology [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the physiology of Human Genome. [30]

2. **Write short notes on the following:**
 - a. Intercellular communication. [10]
 - b. Radio immunoassay. [10]
 - c. Diffusion. [10]
 - d. Structure of cell membrane. [10]

3. Discuss G protein and disease related to it. [30]

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Clinical sciences as related to Physiology

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss pathophysiology of Diabetes mellitus. Justify, it is more a “disease of disturbance in lipid metabolism” than of Carbohydrate metabolism.
[34]
 2. **Write physiological basis of:** [3x11=33]
 - a. Aganglionic megacolon.
 - b. Cardiac arrhythmias.
 - c. Sleep apnoea.
 3. **Write short notes on:** [3x11=33]
 - a. Obesity.
 - b. Hyper Osmolar coma.
 - c. Oxygen toxicity.
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Biophysics, Biochemistry & Histology related to systemic physiology [Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss in detail, Arterial compliance may influence baro-reflex functions in Athletes and hypertensive. [30]

2. Discuss the image-forming mechanism and its defects and correction. [30]

3. **Write short notes on any TWO of the following:** [2x20=40]
 - a. Born-again-bone.
 - b. Genetic basis of dwarfism.
 - c. Types of Patch clamps.

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Systemic Physiology including recent advances [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the role of Juxtaglomerular cell complex in regulation of renal salt excretion. [25]

2. **Write notes on the following:** [3x15=45]
 - a. Pace maker potential.
 - b. Measurement of Coronary blood flow.
 - c. Carbon dioxide dissociation curve.

3. **Discuss briefly:** [3x10=30]
 - a. Red cell fragility.
 - b. Hyperbaric Oxygen therapy.
 - c. Intestinal bacteria.
