

WBPSB Physiology Syllabus

Paper – I :	<p>1. Biophysical Principles : Definition and example of osmosis and buffers; Definition of pH.</p> <p>2. Biochemical Principles : Definition and chemistry of monosaccharides, oligosaccharides, polysaccharides, triglycerides, cholesterol, HDL, LDL, VLDL; amino acids, nucleotides.</p> <p>3. Metabolism : Glycolysis, TCA Cycle, β-oxidation, deamination, transamination.</p> <p>4. Nutrition & Dietetics : Definition of food groups, Balanced diet and ACU. Source, functions and deficiency symptoms of vitamin A, B1, B6, B12, C, D, E, and Fe, Zn, Na, K, Ca, I.</p> <p>5. Blood : Formed elements of blood, functions of hemoglobin; plasma protein. ABO and Rh Blood groups. Overview of innate and acquired immunity.</p> <p>6. Heart and circulation : Properties of cardiac muscle, cardiac cycle, definition and determination of cardiac output, normal ECG waves.</p> <p>7. Respiratory System : Carriage of oxygen and carbon dioxide, definition of lung volumes and capacities, hypoxia.</p> <p>8. Renal Physiology : Structure of nephron, formation of urine, non excretory functions of kidney.</p>
Paper – II :	1. Nerve-Muscle Physiology: Structure and functions of skeletal muscle & nerve fibre,

classification of nerve fibres, neuromuscular junction, neuromuscular transmission, synaptic transmission, origin and propagation of nerve impulse, degeneration and regeneration in nerve fibres.

2. Nervous system :

Basic anatomical organization of the neurons system, ascending and descending tracts, reflex arc, classification and properties of reflexes, functions of sympathetic and parasympathetic neurons system, sleep, memory, learning and aphasia.

3. Sensory physiology:

Eye-structure of retina, accommodation, myopia, hypermetropia and astigmatism; Ear-structure of middle and inner ear, transmission of sound wave through ear; structure of taste buds and smell receptors.

4. Skin and body temperature regulation:

structure and functions of skin and sweat glands, neural and hormonal control of body temperature.

5. Endocrine system:

structure and functions of pituitary, thyroid, parathyroid, pancreas and adrenal gland diseases associated with hypo and hypersecretion of these glands.

6. Reproductive physiology:

Histology of testis and ovary, spermatogenesis, ovulation, menstrual cycle.

7. Work physiology:

Definition of O₂ debt, O₂max, static work, dynamic work and physical fitness index (PFI), Body Mass Index (BMI).

8. Environmental and social physiology:

Air, water and noise pollution, mass immunization, ORS and concept of safe drinking water.