
Blood: Composition and functions of blood, types & functions of Plasma proteins.
- RBC- formation, functions and anemia’s
- WBC- formation, functions and Leukemia’s
- Platelets – formation & functions. Haemostasis & its applied, anticoagulants and Bleeding Disorders.
- Hemoglobin- synthesis and functions, Blood groups- basis of blood grouping, clinical importance, blood banking and transfusion.

Muscle and nerve physiology: Structure, functions and properties of a neuron and neuroglia, Molecular basis of resting membrane and action potential, Transmission of nerve impulse, Structure and transmission across neuro-muscular junction, Neuro-muscular blocking agents, Pathophysiology of Myasthenia gravis, Types and structure of muscle fiber, Action potential in different muscle types, Molecular basis of muscle contraction, Muscular changes during exercise, Properties of excitable tissue.


Reproductive system: Functions of testis & ovary, Spermatogenesis & factors influencing it, Menstrual cycle-hormonal, uterine and ovarian changes, Physiological changes during pregnancy and lactation, Physiological basis for pubertal changes, Physiological effect of sex hormones, Contraceptive methods (male and female methods)

Cardiovascular system: Structure and properties of cardiac muscle, Conducting system of heart, Haemodynamics of circulatory system, Regulation of heart rate and blood pressure and cardiac output, Electrocardiogram-physiological basis and applications, Regional circulation-coronary, cerebral, capillary, foetal and pulmonary circulation. Physiology of shock, coronary artery disease, hypertension, Cardio-pulmonary resuscitation, Abnormal ECG.


**Skin and body temperature regulation**: Mechanism of temperature regulation, Adaptation to altered temperature (heat and cold), Mechanism of fever, cold injuries and heat stroke.

**Physiology of sports, exercise, yoga and meditation**: Cardio-respiratory and metabolic adjustments, Physiological effects of yoga and meditation.

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**Pattern of Question Papers:**

1. Objective Type Paper
2. Maximum Marks : 100
3. Number of Questions : 100
4. Duration of Paper : Two Hours
5. All Questions carry equal marks
6. There will be Negative Marking

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