

BP204T. PATHOPHYSIOLOGY (THEORY)

45Hours

Course content:

Unit-I

10 Hours

Basic principles of Cell injury and Adaptation:

Introduction, definitions, Homeostasis, Components and Types of Feedback systems, Causes of cellular injury, Pathogenesis (Cell membrane damage, Mitochondrial damage, Ribosome damage, Nuclear damage), Morphology of cell injury – Adaptive changes (Atrophy, Hypertrophy, hyperplasia, Metaplasia, Dysplasia), Cell swelling, Intra cellular accumulation, Calcification, Enzyme leakage and Cell Death Acidosis & Alkalosis, Electrolyte imbalance.

Basic mechanism involved in the process of inflammation and repair:

Introduction, Clinical signs of inflammation, Different types of Inflammation, Mechanism of Inflammation – Alteration in vascular permeability and blood flow, migration of WBC's, Mediators of inflammation, Basic principles of wound healing in the skin, Pathophysiology of Atherosclerosis.

Unit-II

10Hours

Cardiovascular System:

Hypertension, congestive heart failure, ischemic heart disease (angina, myocardial infarction, atherosclerosis and arteriosclerosis)

Respiratory system: Asthma, Chronic obstructive airways diseases.

Renal system: Acute and chronic renal failure.

Unit-III

10Hours

Hematological Diseases:

Iron deficiency, megaloblastic anemia (Vitamin B12 and folic acid), sickle cell anemia, thalassemia, hereditary acquired anemia, hemophilia.

Endocrine system: Diabetes, thyroid diseases, disorders of sex hormones.

Nervous system: Epilepsy, Parkinson's disease, stroke, psychiatric disorders: depression, schizophrenia and Alzheimer's disease.

Gastrointestinal system: Peptic Ulcer.

Unit-IV

8 Hours

Inflammatory bowel diseases, jaundice, hepatitis (A, B, C, D, E, F) alcoholic liver disease.

Disease of bones and joints: Rheumatoid arthritis, osteoporosis and gout.

Principles of cancer: classification, etiology and pathogenesis of cancer.

Unit-V**7 Hours****Infectious diseases:** Meningitis, Typhoid, Leprosy, Tuberculosis, Urinary tract infections.**Sexually transmitted diseases:** AIDS, Syphilis, Gonorrhea.**Recommended Books (Latest Editions)**

- Robbins & Cotran Pathologic Basis of Disease by Vinay Kumar, Abul K. Abas, Jon C. Aster; South Asia edition; India; Elsevier.
- Text book of Pathology by Harsh Mohan; 6th edition; India; Jaypee Publications.
- Goodman Gilman's The Pharmacological Basis of Therapeutics by Laurence B, Bruce C., Bjorn K. 12th edition; McGraw-Hill, New York.
- Best and Taylor's Physiological Basis of Medical Practice by Best, Charles Herbert, Taylor, Norman Burke, John Bernard, 12th edition; United States; William and Wilkins, Baltimore.
- Davidson's Principles and Practice of Medicine by Nicki R. College, Brian R. Walker, Stuart H. Ralston, 21st edition; London; ELBS/Churchill Livingstone.
- Textbook of Medical Physiology by Guyton A, John. E Hall; 12th edition; WB Saunders Company.
- Pharmacotherapy by Joseph DiPiro, Robert L. Talbert, Gary Yee, Barbara Wells, L. Michael Posey, A Pathophysiological Approach; 9th edition; London; McGraw Hill Medical.
- Basic Pathology by V. Kumar, R. S. Cotran and S. L. Robbins, 6th edition; Philadelphia; WB Saunders Company.
- Clinical Pharmacy and Therapeutics by Roger Walker, Clive Edwards, 3rd edition; London; Churchill Livingstone Publication.

Recommended Journals

- The Journal of Pathology. ISSN: 1096-9896 (Online).
- The American Journal of Pathology. ISSN: 0002-9440.
- Pathology. 1465-3931 (Online).
- International Journal of Physiology, Pathophysiology and Pharmacology, ISSN: 1944-8171.
- Indian Journal of Pathology and Microbiology. ISSN-0377-4929.