

B. PHARM SEMESTER-II
HUMAN ANATOMY AND PHYSIOLOGY
Subject Code: 2220004
THEORY (4 Hours/Week, 4 Credits, 60 Hours)

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| | formation, refraction abnormalities, photo receptors and physiology of vision. Anatomy of ear, physiology of hearing and equilibrium. Brief outline of cataract, glaucoma, deafness, meniere's disease, otitis media. | |
| 4 | Urinary System: Anatomy of kidney, nephron, functions of renal system, glomerular filtration, tubular reabsorption and tubular secretion and their regulation, formation of urine, ureter, urinary bladder, urethra, brief outline of renal calculi, urinary tract infection, glomerular disease, renal failure, acid base balances and imbalances. | 8 |
| 5 | Endocrine System: Hormone, its type, endocrine glands (pituitary gland, thyroid, parathyroid, adrenals, Pancreas, testes and ovary), their secretion, regulation of secretion, functions and disorders (brief outline of pituitary gland, thyroid gland, adrenal gland, pancreatic islet disorders, definitions of gynecomastia, hirsutism). | 8 |
| 6 | Reproductive System: Gross Anatomy of male reproductive system and their functions, sperm and spermatogenesis, Accessory sex glands. Gross Anatomy of Female reproductive system and their functions, Ovum and Oogenesis, Physiology of Menstruation, Family planning, various contraceptive methods, Medical termination of pregnancy (Abortion), brief outline of erectile dysfunction (Impotence), Premenstrual syndrome, Male and female infertility, endometriosis, Benign prostatic hyperplasia. | 8 |

B. PHARM. SEMESTER-II
HUMAN ANATOMY AND PHYSIOLOGY
Subject Code: 22200P4
PRACTICAL (3 Hours/Week, 3 Credits, 45 Hours)

| Sr. No. | Course Contents | Hours |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1 | Biochemical analysis of urine: physical characteristics, normal constituents | 3 |
| 2 | Biochemical analysis of urine: abnormal constituents | 3 |
| 3 | Identify the constituents of urine in unknown sample. | 3 |
| 4 | Study anatomy of Respiratory system using charts and models | 3 |
| 5 | Study anatomy of Nervous system using charts and models | 3 |
| 6 | Study anatomy of Ear and Eye using charts and models | 3 |
| 7 | Study anatomy of Urinary system using charts and models | 3 |
| 8 | Study anatomy of Male & Female reproductive system using charts & models | 3 |
| 9 | Study histology and functions of various organs of Respiratory system and nervous system using slides | 3 |
| 10 | Study histology and functions of various organs of slides urinary system and male and female reproductive system using slides. | 3 |
| 11 | Study of various contraceptive techniques using charts | 3 |
| HUMAN EXPERIMENTS | | |
| 12 | Determination of body temperature and study of learning and memory (Short term and long term) | 3 |
| 13 | Determination of lung function a. Determination of lung volumes and vital capacity using Spirometer / Flowmeter b. Determination of breath holding time | 3 |
| 14 | Determination of vision acuity a. Near Point and near response b. Determination of Stereoscopic vision c. Dominance of the eye | 3 |
| 15 | Determination of other special senses a. Temperature sensations b. Sensation of taste c. Sensation of smell | 3 |

Books Recommended (Latest Editions):

1. Tortora Gerard. J. and Derrickson Bryan. Principles of Anatomy and Physiology (International Student Edition 13th edition- Wiley)
2. Guyton A.C. and Hall J.E. : Textbook of Medical Physiology – 10th Edition– W. B. Saunders
3. Waugh A. and Grant A.: Ross and Wilson's Anatomy and Physiology in Health illness – Churchill Livingstone
4. Chatterjee C. C. Human Physiology (Medical Allied Agency, Calcutta)
5. West, J. B. Best and Taylor's physiological Basis of Medical Practice (Williams and Wilkins, Baltimore)
6. Martini, F. Fundamentals of Anatomy and Physiology (Prentice Hall)
7. Goyal_R. K. & Mehta A.A._ Human Anatomy Physiology and Health Education, (B. S. Shah Prakashan)
8. Garg K. et al. A Text Book of Histology (CBS Publishers, New Delhi)
9. Sobotta : Atlas of Human Anatomy (2 Volumes) –Edited by Putz and R. Pabst,

Lippincott, Williams and Wilkins

10. Anne M. R. Agur & Ming J. Lee: Grant's Atlas of Anatomy –Lippincott, Williams and Wilkins
11. Gosling T.A., Harris P.F., Whitmore I., William, Human Anatomy: Color Atlas and Text - Mosby
12. Joshi Vijaya D. Preparatory Manual for Undergraduates Physiology (B.I. Churchill Livingstone)
13. Textbook of practical Physiology C.L.Ghai (Jaypee Brothers Medical publishers)
14. Goyal R.K. et al.: Practical Anatomy Physiology and Biochemistry (B. S. Shah Prakashan, Ahmedabad)