

# RAJASTHAN UNIVERSITY OF HEALTH SCIENCES, JAIPUR

DIRECT RECRUITMENT OF DRUG CONTROL OFFICER IN RAJASTHAN DRUG CONTROL ORGANIZATION

## DRUG CONTROL OFFICER RECRUITMENT EXAMINATION 2012

### SYLLABUS

#### **NATURAL PRODUCTS:**

Pharmacognosy of Senna, Digitalis, Clove, Cinnamon, Rauwolfia, Ergot, Belladonna, Vinca, Ginseng, Opium and Gelatin. Chemical nature of the active constituents, tests and mode of action of these drugs.

**PHARMACEUTICS** (Technology of drug delivery system, Biopharmaceutics, Pharmaceutical legislation):  
Technology of drug delivery system: Manufacture, Standards, labelling, packaging and storage of dosage forms like tablets, capsules, liquid orals, injectables, topical preparations, blood products and plasma substitutes, sustained release dosage forms and novel drug delivery systems.

Sterilization: Different methods of sterilization and sterility testing of pharmaceuticals.

Basics of pharmacokinetics and their importance in formulation, Bioavailability, Bioequivalence, Stability studies.

Drugs and Cosmetics Act and Rules, Pharmacy Act, Narcotic and Psychotropic Substances Act, Essential Commodities Act, Drugs (Price Control) Order.

#### **PHARMACEUTICAL ANALYSIS:**

Principles and application of absorption spectroscopy, chromatography, potentiometry, complexometry, non-aqueous titrations with reference to drugs given in Indian Pharmacopoeia. Microbiological assays and biological standardization of antibiotics and vitamins as per I.P.

#### **PHARMACOTHERAPEUTIC AGENTS AND CLINICAL PHARMACOLOGY:**

Nomenclature, synthesis, uses, mechanism of action, SAR and metabolism of drugs belonging to the following categories which are official in Indian Pharmacopoeia.

Neuroleptics and tranquilisers, antihypertensives, antiarrhythmics, vasodilators, diuretics, antibiotics, sulphonamides, analgesics and anti-inflammatory drugs, antihistaminics, antineoplastics, antiamebics, oral contraceptives, antituberculars and antileprotics, antimalarials, insulin and other antidiabetics, corticosteroids, antiulcer and antiasthmatics.

Clinical aspects of pharmacy and pharmacology, drug interactions, Basic concepts of drug metabolism.

Evaluation of drugs in human beings/ clinical trials.

Drug therapy in paediatrics, geriatrics and during pregnancy.

Radioisotopes in medical practice, Biological effects of radiation.

#### **MICROBIOLOGY AND BIOTECHNOLOGY:**

Classification, cultivation, isolation, identification and nutritional needs of bacteria, viruses, protozoa and fungi, Microbial genetics and variations, Theoretical aspects of immunity, sources and mode of infection, general methods of preparation, standardization, preservation, storage and uses of Vaccines, Sera and diagnostic agents, Antigen - antibody reactions, Mycobacterium - Tuberculosis, Leprosy - Salmonella, Shigella, spirochetes, mycoplasma, diarrhoeal diseases, ELISA, Bacteriology of water, milk and food. Drug sensitivity tests for Bacteria.

Fermentation technology: production of alcohol, acetic acid, citric acid, penicillin, tetracycline.