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Syllabus

BP501T Medicinal Chemistry II (Theory)

Unit I

10 hrs

(a) Antihistaminic Agents: Histamine, receptors and their distribution in the human body

H1-Antagonists: Diphenhydramine hydrochloride*, Dimenhydrinate, Doxylamine succinate, Clemastine fumarate, Diphenylpyraline hydrochloride, Tripeleminamine hydrochloride, Chlorcyclizine hydrochloride, Meclizine hydrochloride, Buclizine hydrochloride, Chlorpheniramine maleate, Triprolidine hydrochloride*, Phenindamine tartrate, Promethazine hydrochloride*, Trimeprazine tartrate, Cyproheptadine hydrochloride, Azatadine maleate, Astemizole, Loratadine, Cetirizine, Levocetirizine, Cromolyn sodium.

H2-Antagonists: Cimetidine*, Famotidine, Ranitidine.

Gastric Proton Pump Inhibitors: Omeprazole, Lansoprazole, Pantoprazole, Rabeprazole.

(b) Antineoplastic Agents:

Alkylating Agents: Mechlorethamine*, Cyclophosphamide, Melphalan, Chlorambucil, Busulfan, Thiotepa,

Antimetabolites: Mercaptopurine*, Thioguanine, Fluorouracil, Floxuridine, Cytarabine, Methotrexate*, Azathioprine.

Antibiotics: Dactinomycin, Daunorubicin, Doxorubicin, Bleomycin.

Plant Products: Etoposide, Vinblastine sulphate, Vincristine sulphate.

Miscellaneous: Cisplatin, Mitotane.

Unit II

10 hrs

(a) Antianginal Agents:

Vasodilators: Amyl nitrate, Nitroglycerin*, Pentaerythritol tetranitrate, Isosorbide dinitrate*, Dipyridamole.

Calcium Channel Blockers: Verapamil, Bepridil hydrochloride, Diltiazem hydrochloride, Nifedipine, Amlodipine, Felodipine, Nicardipine, Nimodipine.

(b) Diuretics:

Carbonic anhydrase Inhibitors: Acetazolamide*, Methazolamide, Dichlorphenamide.

Thiazides: Chlorthiazide*, Hydrochlorthiazide, Hydroflumethiazide, Cyclothiazide.

Loop Diuretics: Furosemide, Bumetanide, Ethacrynic acid.

Potassium Sparing Diuretics: Spironolactone, Triamterene, Amiloride.

Osmotic Diuretics: Mannitol

(c) Antihypertensive Agents: Timolol, Captopril, Lisinopril, Enalapril, Benazepril hydrochloride, Quinapril hydrochloride, Methyldopate hydrochloride*, Clonidine hydrochloride, Guanethidine monosulphate, Guanabenz acetate, Sodium nitroprusside, Diazoxide, Minoxidil, Reserpine, Hydralazine hydrochloride.

Unit III

10 hrs

(a) Antiarrhythmic Agents: Quinidine sulphate, Procainamide hydrochloride, Disopyramide phosphate*, Phenytoin sodium, Lidocaine hydrochloride, Tocaine hydrochloride, Mexiletine hydrochloride, Lorcanide hydrochloride, Amiodarone, Sotalol.

(b) Antihyperlipidemic Agents: Clofibrate, Lovastatin, Cholesteramine and Cholestipol.

(c) Coagulants and Anticoagulants: Meandione, Acetomenaphthone, Warfarin*, Anisindione, Clopidogrel.

(d) Drugs used in Congestive Heart Failure: Digoxin, Digitoxin, Nesiritide, Bosentan, Tezosentan.

Unit IV

08 hrs

Drugs acting on Endocrine System: Nomenclature and metabolism of steroids.

Sex hormones: Testosterone, Nandrolone, Progesterone, Oestriol, Oestradiol, Oestrione, Diethylstilbestrol.

Drugs for Erectile Dysfunction: Sildenafil, Tadalafil.

Oral Contraceptives: Mifepristone, Norgestrel, Levonorgestrol.

Corticosteroids: Cortisone, Hydrocortisone, Prednisolone, Betamethasone, Dexamethasone.

Thyroid and Antithyroid Drugs: L-Thyroxine, L-Thyronine, Propyl thiouracil, Methimazole.

Unit V

07 hrs

(a) Antidiabetic Agents: Insulin and its preparation

Sulfonyl Ureas: Tolbutamide*, Chlorpropamide, Glipizide, Glimepiride.

Biguanides: Metformin

Thiazolidinediones: Pioglitazone, Rosiglitazone.

Meglitinides: Repaglinide, Nateglinide.

Glucosidase Inhibitors: Acarbose, Voglibose.

(b) Local Anesthetics: SAR of Local anesthetics

Benzoic Acid Derivatives: Cocaine, Hexylcaine, Meprylcaine, Cyclomethycaine, Piperocaine.

Amino Benzoic Acid Derivatives: Benzocaine*, Butamben, Procaine*, Butacaine, Propoxycaine, Tetracaine, Benoxinate.

Lidocaine/Anilide Derivatives: Lignocaine, Mepivacaine, Prilocaine, Etidocaine.

Miscellaneous: Phenacaine, Dipradon, Dibucaine*.