STUDY GUIDE

FIRST SEMESTER

500L

EZE WISDOM CHIKWADO

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1st Jacking ☐

2nd Jacking ☐

3rd Jacking ☐

Revision ☐

THEORY COURSES

PTI 511 - 2 UNITS	Lecturer	Mat/note				
INDUSTRIAL SET UP AND FORMULATION PROCESS						
1. Formulation and production of medicines.						
2. Present state of Pharmaceutical industry in Nigeria.						
3. Systematic development of Pharmaceutical industry.						
4. Essential elements for setting up a viable Pharmaceutical industry including primary and auxiliary industries.						
5. Materials of construction, plant design, infrastructural facilities, building specifications. Production management.						
6. Potential and unexplored raw materials in Nigeria for Pharmaceutical industry						
7. Pilot plant, scale up technologies for tablets, capsules						
8. Pilot plant scale up technologies for semi - solids, etc.						
9. Formulation of herbal medicines into dosage forms. Standardization, stability studies, microbiological evaluation and standardization of doses.						
10. Aerosol Science and Technology. Formulation of aerosols. Basic aerosol technology. Formulation techniques of different aerosol systems. Factors affecting spray characteristics of aerosols. Filling techniques and testing methods of aerosol packs.						

PCH 531 - 2 UNIT	Lecturer	Mat/note				
MEDICINAL CHEMISTRY II						
1. Sulphonamides						
2. Steroids and steroidal hormones: Study of the Chemistry, nomenclature, physicochemical properties, stereochemistry, synthesis (where necessary), structure activity relationships, metabolism and uses of						
3. Antihypertensives						
4. Diuretics						
5. Anti - malarials						
6. Antibiotics						
7. Antihelminthics						
8. Trypanocides						

9. Schistosomicides						
10. Amoebicides						
11. Anticancer agents						
12. Antiviral agents						
13. Photochemistry: General print, characteristics of photochemical reactions and applications for both synthesis and spoilage of drugs.						

PCH 533 - 2 UNIT	**Lecturer**	**Mat/note**				
NATURAL PRODUCT CHEMISTRY						
1. Steroids						
2. Alkaloids						
3. Purines: Chemistry of substances of natural origin viz						
4. Terpenes and Terpenoids						
5. Glycosides						
6. Flavonoids						
7. Saponins						
8. Xanthines						
9. Carbohydrates						
10. Tannins						
11. Lipids						
12. Amino acids						
13. Protein						

PCG 541 - 2 UNITS	**Lecturer**	**Mat/note**				
HERBAL, COMPLEMENTARY AND OTHER ALTERNATIVE MEDICINES						
1. Mind-body interventions, manual manipulations, Aromatherapy, Hypnosis, Acupuncture, Homeopathy						
2. The concept of Alternative medicines, Reasons for the rising trends towards alternative medicines: Cultural, Socioeconomic, immigration and perceptions of conventional medicines						
3. Traditional birth Attendance, Nutrition and Lifestyle, Diet, Psychiatry, Bone setting, Hydrotherapy						

4. Global situation in the use of traditional Medicine. Regulation of herbal and Alternative Medicine PHYTOCHEMISTRY AND ENVIRONMENTAL MEDICINES						
5. Phytochemistry: General Principles Classification, detection, sources, chemistry, action, uses of medicinally important alkaloids, volatile oils and glycosides.						
6. Photosynthesis and Carbohydrate Utilization						
7. Methods of Biosynthetic Studies: Biosynthetic pathways.						
8. Phytocosmetics and Nutraceuticals.						
9. Environmental Medicine: Natural Approach to Environmental diseases (Heat, Stroke, Exhaustion, Hypothermia, High Altitude affectation)						
10. Nigerian Medicinal Plants: Poisonous and Ordeal Plants of Nigeria. Detailed Study of Prescribed Number of such plants that are of Pharmacological and Toxicological Interest.						
11. Traditional Medicine: History, Forms, Methods and Technques. Advantages and Disadvantages of Integration with orthodox medicine.						
12. Field Trip						

PCL 551 - 2 UNITS	**Lecturer**	**Mat/note**				
MOLECULAR PHARMACOLOGY						
1. Principles of Molecular Pharmacology						
2. Composition and Functions of Sub-cellular Organelles as related to Drug Actions						
3. Methods and Measurements in Pharmacology						
4. Mechanisms of drug actions. Selectivity of drug action, Drug receptors, Drug-receptor interactions and theories of drug actions, Signal transduction, Second messengers						
5. Drug antagonism and determination of pA values – Schild plot						
6. Neurohumoral transmission						
7. Methods of studying neurotransmitters						
8. Structure-activity relationships - sympathomimetics, cholinomimetics, narcotic analgesics, barbiturates, benzodiazepines, etc.						
9. Biochemical mechanisms of drug resistance						

CPM 561 - 2 UNIT	Lecturer	Mat/note				
PHARMACY ADMINISTRATION - MANAGEMENT						
1. Management models and processes						
2. Definitions of management and administration						
3. Importance of management in pharmacy business						
4. Personnel management (leadership, recruitment, remuneration, negotiation, staff training, evaluation, motivation and management)						
5. Entrepreneurial Development-Generating and developing business Plans/ideas.						
6. Conducting a market survey. Selecting a business location, including roads, water, and electricity supplies, and appropriate technology for the business						
7. Supply chain management of pharmaceuticals and other health commodities in Nigeria.						
8. Introduction to health commodities supply chain management; Logistics management information systems and Min-Max Inventory Control Systems						
9. Storage of health commodities and assessing health logistics systems						
10. Drug product selection and quantification						
11. Supply planning and procurement; monitoring and supervision of logistic system						

CPM 563 - 1 UNIT	Lecturer	Mat/note				
BIOSTATISTICS						
1. Review of basic statistics						
2. Measures of central tendencies						
3. Paired sample hypothesis: parametric and nonparametric analysis						
4. Multi-sample hypothesis and multiple comparisons						
5. Two factors of analysis of variance, Multi-way factorial analysis of variance						
6. Linear regression and comparing linear regression equations; data transformation						
7. Simple linear correlation and multiple regressions						
8. Binomial distribution, testing for randomness and data using statistical computer packages						
9. Designing research methodology; selecting appropriate statistical tests						
10. Computer-based data analysis						
11. Interpretation and evaluation of results						

PMB 571 - 2 UNITS	Lecturer	Mat/note				
MICROBIAL CHEMOTHERAPY AND BACTERIAL GENETICS						
1. Brief historical perspective of chemotherapy. Fundamental principles of rational chemotherapy – selective toxicity principle.						
2. Drug inhibiting cell wall synthesis (beta-lactam antibiotics), inhibitors of protein synthesis (aminoglycosides, macrolides, tetracyclines)						
3. Drugs which interfere with cell membrane integrity. Inhibitors of RNA and DNA synthesis (quinolones)						
4. Miscellaneous antimicrobials e.g. sulphonamides, trimethoprim, fusidic acid, clindamycin, lincomycin, chloramphenicol						
5. Antifungal agents and Antiviral agents						
6. Interferon and interferon inducers						
7. Development of resistance to antibiotics by microorganisms; plasmid mediated and biochemical basis. Control of emergence of resistance						
8. Introduction to bacterial genetics and genetic engineering						

PMB 573 - 2 UNITS	Lecturer	Mat/note				
BIOTECHNOLOGY II						
1. Biotechnology in vaccine development – DNA vaccine, vaccine production by recombinant DNA for prevention of infections						
2. Medical importance of recombinant proteins e.g. insulins, growth hormones, interferon.						
3. Engineering antibodies for therapy – production of monoclonal antibodies, recombinant antibodies and antibody fragment.						
4. Biotechnology manufacturing facility and environment. General layout, environmental requirements and associated quality assurance (QA) in production.						
5. Biotechnology manufacturing facility and environment. General layout, environmental requirements and associated quality assurance (QA) in production.						
6. Biosafety						

7. Biotechnological products and pharmaceutical care – an overview of relevant information service to patients on storage, re-constitution, stability, antigenicity, and self-administration						

CPM 581 - 2 UNITS	**Lecturer**	**Mat/note**				
CLINICAL PHARMACOKINETICS						
1. Discussions on the principles of Absorption, Distribution, Metabolism and Excretion						
2. Utilization and application of pharmacokinetic principles in developing a pharmaceutical care plan for a given patient						
3. Use of mathematical principles to predict drug disposition in individual patients						
4. Effect-time and concentration-effect relationships						
5. Determination of concentration in serum and other body fluids and interpretation of results						
6. Dosage adjustments in organ dysfunction and other disease states						
7. Dosage selection						
8. Compartmental models and drug disposition in models						
9. Introduction to therapeutic drug monitoring						
10. General applications of pharmacokinetics to clinical situations						

CPM 585 - 2 UNITS	**Lecturer**	**Mat/note**				
PHARMACOTHERAPEUTICS I						
1. Asthma						
2. HIV/AIDS						
3. Malaria						
4. Anemia						
5. Filariasis						
6. Tuberculosis						
7. Urinary tract infections						
8. Obstructive pulmonary disease						
9. Amebiasis						
10. Salmonellosis						

SUMMARY

Total number of materials released before TEST		
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