



**DEPARTMENT: SCHOOL OF PHARMACY**

**CIRCULAR**

No: AJU/SOHAS/033/24

Date 29th February 2024

It is hereby notified that all the students of B. Pharm 2nd (2023), 4th (2022) and 6th (2021) semester 2020 batch, need to present their seminar and submit the assignment before 30<sup>th</sup> March 2024. Find the topic of seminar and assignment attached to the circular. Concerned teachers need to prepare and submit the reports.

Sl. No.	Subject	Assignment 1	Assignment 2	Seminar
1	Human Anatomy and Physiology II – Theory	Spinal cord (gross structure, functions of afferent and efferent nerve tracts, reflex activity)	Physiology of menstruation	Group A: Endocrine system Group B: Respiratory system Group C: Digestive System Group D: Reproductive system
2	Pharmaceutical Organic Chemistry I – Theory	Alkane and Alkene	Structure and Uses of Ethyl chloride and Benzyl alcohol	Group A: Classification of Organic Compounds & Structural Isomerism Group B: SN1 & SN2 Reaction and Ozonolysis Group C: Crossed Aldol Condensation & Cannizzaro Reaction Group D: Qualitative test, structure and uses of Ethyl Alcohol, Benzyl alcohol, Glycerol & Propylene Glycol
3	Biochemistry – Theory	Glycolysis: Pathway, energetics and significance	DNA replication (semi-conservative model)	Group A: Urea cycle and its disorders Group B: Citric acid Cycle: Pathway, energetics and significance Group C: $\beta$ -Oxidation of saturated fatty acid Group D: Enzyme kinetics (Michaelis plot, Line Weaver Burke plot)
4	Pathophysiology – Theory	Pathophysiology of Thalassemia, sickle cell anemia and Epilepsy.	Pathogenesis of sexually transmitted disease.	Group A: Basic principles of Cell injury and Adaptation. Group B: Cardiovascular system Group C: Cardiovascular system Group D: Principle of cancer
5	Environmental sciences – Theory	Waste water and sludge treatments	Natural Resources	Group A: Aquatic ecosystem Group B: Devices used to control air pollution Group C: Forest ecosystem Group D: Man made resources


### B.Pharmacy 4<sup>th</sup> Semester

Sl. No.	Subject	Assignment 1	Assignment 2	Seminar
1	Pharmaceutical Organic Chemistry III	Nomenclature of geometrical isomers (Cis Trans, EZ, Syn Anti Systems)	DL System of nomenclature of optical isomers, sequence rules & RS system	Group A- Racemic modification and resolution of racemic mixture. Group B- Methods of determination of configuration of geometrical isomers. Group C - Conformational isomerism in Ethane, n-Butane and Cyclohexane Group D - Stereospecific and stereoselective reactions
2	Medicinal Chemistry I	Drug Metabolism, Phase 1 & Phase 2	Inhalation anaesthetics	Group A- Ionization & Solubility of drug. Group B- Biosynthesis and catabolism of catecholamine. Group C - Biosynthesis and catabolism of acetylcholine. Group D - Bioisosterism, Optical isomerism give example
3	Physical Pharmaceutics II	Properties of Colloids and their applications.	Formulation of flocculated and deflocculated suspensions.	Group A ,B,C& D -Importance and applications of micromeritics in Pharmacy.
4	Pharmacology I	Absorption of drugs.	Adverse drug reaction	Group A- Antidepressant drugs Group B- Sedative and Hypnotics Group C – CNS Stimulants and Nootropics Group D – Opioids analgesics and antagonists.
5	Pharmacognosy I	Adulteration of drugs and its evaluation parameters.	Novel Medicinal agents from Marine sources.	Group A- Role of Pharmacognosy in traditional systems of medicine namely, Ayurveda. Group B- Role of Pharmacognosy in traditional systems of medicine namely, Unnani. Group C- Role of Pharmacognosy in traditional systems of medicine namely, Siddha. Group D- Role of Pharmacognosy in traditional systems of medicine namely, Homeopathy.

### B.Pharmacy 6<sup>th</sup> Semester

Sl. No.	Subject	Assignment 1	Assignment 2	Seminar
1	Medicinal Chemistry II	Nomenclature, Classification MOA, Stereochemistry & chemical Degradation of Penicillin	Nomenclature, Classification MOA, Stereochemistry & chemical Degradation of Cephalosporin	Group A: Antimicrobial Resistance Group B: Introduction to Drug Design Group C: Combinatorial Chemistry. Group D: Urinary tract anti-infective agents
2	Pharmacology III	Assignment on Appetite stimulants and suppressants. Digestants and Carminatives.	Assignment on general principles of treatment of Poisoning. Write down clinical symptoms and management of organophosphorus and arsenic poisoning.	Group A: Seminar on antifungal agents. Group B: Seminar on antileprotic agents Group C: Seminar on expectorants and antitussives. Group D:-Seminar on urinary tract infections and sexually transmitted diseases.
3	Herbal Drug Technology	Nutraceuticals in ailments like	Conventional herbal formulations	Group A: Herbal-Drug and Herb-food interaction

		Diabetes, CVS diseases, Cancer, Irritable bowel syndrome.	like syrups, mixtures and tablets and Novel dosage forms like phytosomes.	Group B: Biodynamic Agriculture Group C: Herbal formulations Group D: General introduction to Herbal industry.
4	Biopharmaceutics and Pharmacokinetics	Fick's First law of Diffusion	Bioavailability	Group A: One compartment open model Group B: Plasma protein Binding of Drugs Group C: Renal excretion of Drugs Group D: Bioequivalence studies
5	Pharmaceutical Biotechnology	General Considerations of Amylase & Catalase.	Application of rDNA Technology & genetic engineering in the Production of (vaccine).	Group A: Enzyme Immobilization Group B: Protein Engineering GroupC: Enzyme Biotechnology GroupD: Genetic engineering
6	Quality Assurance	Warehousing of penicillin	Quality control test for rubber closures	Group A: premises-Design, construction and plant layout, maintenance, sanitation. Group B: premises- maintenance of sterile areas, control of contamination Group C: quality control- secondary packing materials and containers Group D: complaint- Handling of return good, recalling and waste disposal.

  
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 ARKA JAIN University, Jharkhand

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**Dean**

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