



GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM)

(Declared as Deemed to be University u/s 3 of UGC Act, 1956)

Visakhapatnam | Hyderabad | Bengaluru

Accredited by NAAC with A++ Grade

Website: www.gitam.edu

GITAM SCHOOL OF PHARMACY

PhD Entrance Test Syllabus

PhD in Pharmacy: Pharmaceutical Chemistry

Module 1: Pharmaceutical Organic Chemistry

Structure, nomenclature, stereochemistry, reactivity, named reactions, reagents, and associated mechanism.

Module 2: Heterocyclic Chemistry

Structure, nomenclature, synthesis, chemical reactions, and medicinal uses.

Module 3: Medicinal Chemistry

Structure, nomenclature, classification, synthesis, SAR, mechanism of action, therapeutic uses, and metabolism of the following classes: Drugs acting on ANS, CNS, CVS, Anti-infectives, and Anti-cancer agents.

Module 4: Biochemistry

Biochemical role of biomolecules (Carbohydrates, Proteins, Lipids, Nucleic acids), hormones, vitamins, enzymes, metabolic pathways, and bioenergetics.

Module 5: Phytochemistry

Major classes of phytochemicals (Alkaloids, Terpenoids, Phenolics, Glycosides); their isolation, identification, and biological activities.