

SUBJECT: COMPUTER AIDED DRUG DESIGN (BP807ET)

COURSE: FINAL YEAR B.PHARM

UNIT 3 : MOLECULAR MODELING AND VIRTUAL SCREENING TECHNIQUES

2 MARK QUESTIONS (Short Answer)

QUESTION TYPE	QUESTIONS	MAPPING TO TNMGRMU / GPAT / NIPER / PHARMA (YEAR)	BLOOM'S TAXONOMY
2 Marks	Define virtual screening.	TNMGRMU (2022), GPAT (2020)	Remember
2 Marks	What is drug-likeness? Mention any one rule.	GPAT (2019), Industry Aptitude	Remember
2 Marks	State Lipinski's Rule of Five.	TNMGRMU (2021), GPAT (2021)	Remember
2 Marks	Define pharmacophore.	GPAT (2018), NIPER (2019)	Remember
2 Marks	What is pharmacophore mapping?	TNMGRMU (2023)	Understand
2 Marks	Define molecular docking.	GPAT (2020), Industry (2021)	Remember
2 Marks	What is rigid docking?	TNMGRMU (2020)	Understand
2 Marks	What is flexible docking?	GPAT (2022)	Understand
2 Marks	What is docking score?	Industry Exams (2022)	Understand
2 Marks	Define de novo drug design.	NIPER (2020), GPAT (2023)	Remember

5 MARK QUESTIONS (Short Essay)

QUESTION TYPE	QUESTIONS	MAPPING TO TNMGRMU / GPAT / NIPER / PHARMA (YEAR)	BLOOM'S TAXONOMY
5 Marks	Explain drug-likeness screening with suitable examples.	TNMGRMU (2022)	Understand
5 Marks	Describe the importance of virtual screening in drug discovery.	GPAT (2021)	Understand
5 Marks	Explain the concept of pharmacophore mapping.	NIPER (2021)	Analyze
5 Marks	Write a short note on pharmacophore-based screening.	GPAT (2020)	Understand
5 Marks	Differentiate rigid docking and flexible docking.	TNMGRMU (2023), Industry (2022)	Analyze

5 Marks	Explain the steps involved in molecular docking.	GPAT (2019)	Understand
5 Marks	Write a short note on docking-based virtual screening.	NIPER (2022)	Analyze
5 Marks	Explain the role of scoring functions in docking.	Industry Exams (2021)	Apply
5 Marks	Write a short note on manual docking.	TNMGRMU (2020)	Understand
5 Marks	Explain the basic concept of de novo drug design.	GPAT (2023)	Understand

10 MARK QUESTIONS (Long Essay)

QUESTION TYPE	QUESTIONS	MAPPING TO TNMGRMU / GPAT / NIPER / PHARMA (YEAR)	BLOOM'S TAXONOMY
10 Marks	Explain virtual screening techniques in detail with advantages and limitations.	TNMGRMU (2023)	Analyze
10 Marks	Describe drug-likeness screening methods and their significance in lead identification.	GPAT (2022)	Analyze
10 Marks	Explain pharmacophore mapping and pharmacophore-based screening with diagrams.	NIPER (2021)	Analyze
10 Marks	Discuss molecular docking in detail, including rigid and flexible docking approaches.	GPAT (2020), TNMGRMU (2022)	Analyze
10 Marks	Explain docking-based screening workflow with examples.	Industry Exams (2023)	Apply
10 Marks	Describe the principles, steps, and applications of de novo drug design.	NIPER (2022), GPAT (2023)	Create
10 Marks	Compare pharmacophore-based screening and docking-based screening.	TNMGRMU (2021)	Evaluate
10 Marks	Explain the role of molecular docking in modern drug discovery.	Industry (2022)	Evaluate