

M.Sc Sem.-2 Examination

P - 410

Toxicology

June 2022

Time : 2-00 Hours]

[Max. Marks : 50

<b>Q.1</b>	<b>Answer the Following Questions (Any Six)</b>	<b>42 Marks</b>
<b>1</b>	Define Homology Modeling and what are the basic requirements to predict a protein structure using Homology Modeling tools?	
<b>2</b>	Explain the concepts of pharmacokinetics and pharmacodynamics in detail.	
<b>3</b>	Explain the importance of computational toxicology in drug discovery.	
<b>4</b>	What does toxicogenomics refer to? Explain database related to toxicogenomics available on public domain.	
<b>5</b>	Define a database and explain about small molecule databases available publicly.	
<b>6</b>	Explain the types of data available with the following databases:	
<b>7</b>	Explain in brief about in silico protein structure prediction methods.	
<b>8</b>	As per E4 guideline what are the regulatory Considerations for toxicology studies in Life threatening conditions and when dose response data are imperfect	
<b>9</b>	Explain the applications of cheminformatics tools in computational toxicology	
<b>10</b>	Explain the applications of QSAR in computational toxicology.	
<b>Q.2</b>	<b>Answer the Following Short Questions (Any Eight)</b>	<b>8 Marks</b>
<b>1</b>	Drug with high potency can be less in efficacy. True or false?	
<b>2</b>	How is therapeutic index determined?	
<b>3</b>	Define template sequence and query sequence	
<b>4</b>	What is meant by binding pose?	
<b>5</b>	Define a Pharmacophore in literal words.	
<b>6</b>	What is the importance of ADMET analysis of small molecules in computational toxicology?	
<b>7</b>	What does BBB refer to? Explain its importance in Drug discovery.	
<b>8</b>	Define Randomisation	
<b>9</b>	What is Loading dose and Maintenance dose?	
<b>10</b>	What causes U shaped Dose response Curve	

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