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PAT-MPL-203-T Seat No. _____

M. Pharm. (Pharmacology) (Sem. II) (External) Examination

August / September - 2020

MPL-203-T : Principles of Drug Discovery

Time : **3** Hours] [Total Marks : **75**

Instructions : (1) Draw clean diagrams wherever necessary and tie each section separately.

(2) Figure to the right indicates full marks for the respective question.

1 Answer the following Questions : **10×2=20**

(a) Enlist different levels of protein structures.

(b) Describe role of nucleic acid microarrays.

(c) What is lead identification in drug discovery process.

(d) What is siRNAs.

(e) Define Molecular docking studies.

(f) What is partial least square analysis (PLS).

(g) What is Role of transgenic animals intarget validation.

(h) Give importance of rational drug design.

(i) What is Denovo drug design.

(j) What is Hansch analysis.

2 Answer any **two** out of Following : **2×10=20**

(a) Enlist different QSAR Statistical methods & discuss about regression analysis 3DQSAR approache.

(b) What is target drug discovery? Discuss about validation-Role of Genomics, Proteomics and Bioinformatics in target drug discovery.

(c) Write a detailed note on rational drug design.

3 Answer any **seven** out of the following : **7×5=35**

(a) Describe the Application of NMR and X-ray crystallography in protein structure prediction.

(b) Discuss about Antisense technologies in Targetted drug discovery process.

(c) Write a note on high throughput screening techniques.

(d) Discuss various methods followed in traditional drug design.

(e) Explain the Concepts of Rational Drug Design.

(f) Discuss varius Virtual Screening techniques.

(g) Write a note on Computationalprediction of protein structure.

(h) Discuss about the history and development of QSAR.

(i) Discuss about prodrug design and mention rationale of prodrug design.