04/01/2021

Total No. of printed pages = 2

MPH 202T

Roll No. of candidate | | | | | | | | | | |

2020

M.Pharm. 2nd Semester End-Term Examination

ADVANCED BIOPHARMACEUTICS AND PHARMACOKINETICS

Full Marks – 75 Time – Three hours

The figures in the margin indicate full marks for the questions.

GROUP – A

Answer *all* the questions : (10 × 2 = 20)

1. 'Sustained release drug delivery system reduces the dosing frequency' - justify the comment.
2. Write a short note on - Bio pharmaceutics Classification System.
3. 'Micronization of hydrophobic drugs actually reduces the rate of dissolution' - comment on that.
4. Define and explain the significance of absorption window.
5. 'Permeability is the rate controlling step in absorption of a hydrophilic drug' - justify the comment.
6. Write a short note on - bile acid transport system for peptide drug delivery.
7. 'Toxicity may precipitate when rate of absorption of a drug is higher than the rate of elimination' - comment on that.
8. How does obesity influence V_d of a drug and hence its dose size?
9. Why are fluctuations smaller when the drug is given extravascular route than multiple IV boluses?
10. Write down the effect of Ka and K_E on C_{max}, t_{max} and AUC.

[Turn over

GROUP – B

Answer any *seven* questions : (7 × 5 = 35)

11. Discuss the similarities and differences between passive and facilitated diffusion. (5)

12. Using the Noyes - Whitney's equation, briefly discuss the influences of variables in drug dissolution. (5)

13. Discuss the significance and limitations of the pH partition hypothesis. (5)

14. Briefly discuss the various compendial methods of dissolution of solid oral dosage forms. (5)

15. Discuss the applications, advantages and disadvantages of compartment models. (5)

16. 'Zero order half-life depends on the initial concentration of drug' - mathematically deduce. (5)

17. Discuss the importance of similarity factor and difference factor in dissolution profile comparison. (5)

18. Briefly write down the clinical significance of bioequivalence study. (5)

19. Write a brief note on - Monoclonal antibodies. (5)

GROUP – C

Answer any *two* questions : (2 × 10 = 20)

20. How do you assess the bioavailability by means of pharmacokinetic methods? (10)

21. Deduce the various pharmacokinetic parameters when a drug is given by IV bolus, assuming it follows one compartment open model. (10)

22. Delivery of proteins and peptide drug is challenging - why? What are the effective measures to be made to improve the stability of such drug after oral administration? (3 + 7)