CLASS: BPHARM   SEMESTER: VIII
BRANCH: PHARMACY   SESSION : SP/2020

SUBJECT: PS8403 DRUG DELIVERY SYSTEM

TIME: 2 HOURS   FULL MARKS: 25

INSTRUCTIONS:
1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.
6. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q1   (a) Discuss the rationale for sustained and controlled release systems.   [2]
     (b) Write the differences between a conventional, Sustained and controlled release system   [3]
          with the help of diagrammatic representation.

Q2   (a) Discuss the advantages of Polymer controlled drug delivery systems.   [2]
     (b) What is a reservoir system? Explain with Diagram and graphs   [3]

Q3   (a) What is a matrix system? Explain with Diagram and graphs   [2]
     (b) Discuss the rationale for site specific drug delivery systems.   [3]

Q4   (a) Discuss the parameters governing the drug kinetics.   [2]
     (b) Calculate the peak time Tp of Paracetamol, when administered, the absorption rate   [3]
          constant ka and elimination rate constant ke are $2.0hr^{-1}$ and $0.97hr^{-1}$ respectively.

Q5   (a) Calculate the bioavailbility factor F, when AUC oral as well as AUV I.V are 100mg.hr/Lit [2]
          and 200mg.hr/Lit respectively.
     (b) Discuss the physicochemical parameters as well as the pharmacokinetic parameters for   [3]
          a drug to be utilized for sustained dosage form.

Q6   (a) Discuss the osmotic pressure activated system for Liquid formulations along with   [2]
          equations governing the system.
     (b) Write short notes on the following: [3]
          i.   Swelling and Expansion systems.
          ii.   Ion exchange resins

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