Ref. No.: Ex/PG/PHAR/T/128A/2017

M. PHARM. FIRST YEAR 2nd SEMESTER EXAMINATION, 2017

Subject: PHARMACEUTICS –III **Time: three hours** **Full Marks: 100**

Group – A

Answer any *five* questions taking at least one from each group.

Use separate answer script for each group

1. What are multiple emulsions? How can you prepare & stabilize w/o/w type multiple emulsion? What are the major applications of such formulation? (20)

2. What are nanoparticles? What are the advantages & limitations of nanoparticles as a drug delivery system? Write a short note on applications of nanoparticles. (20)

3. What is liposome? What are the materials uses & the mechanisms involved there to form liposome vesicles? What may be the different approaches to access its physical stability? What are the areas of applications of such formulations? (20)

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M. PHARMACY FIRST YEAR SECOND SEMESTER EXAMINATION 2017

Subject: PHARMACEUTICS III

Answer at least two questions from each group
Answer separate answer scrip for each group

GROUP - B

4. Develop the Wagner-Nelson equation to show how Ka can be determined. How does Loo-Riegelman method differ from Wagner-Nelson method? Determine absolute bioavailability in term of half-life with the urinary excretion data of the drug eliminated through urine as unchanged drug.

A drug is administered to a patient at the rate of 250mg/day and 400 mg/day. Css values are 13 and 26.3 mg/L. Find Km and Vmax, and dose to achieve Css of 15.6 mg/L.

5+2+5+7 = 20

5. Using two-compartment model, show that systemic bioavailability of a drug by oral route is invariably less than that observed by i.v. administration. 20

6. Determine drug metabolite level in plasma. What do you mean by Flip-Flop phenomenon? How will you determine Ka by residual method? Why is it called peeling method? A drug has adult dose 450mg in a day. Calculate the dose of 78 y old man of 72 kg body weight. A child has 5kg body weight, what will be dose of the drug for that child? The child has the height of 3 feet. 4+3+4+2+7 = 20

7. Distinguish the terms: Bioequivalents, Pharmaceutical equivalents and therapeutic equivalents. Write short notes on Latin square crossover design and Balanced incomplete block design. Describe the following with respect to BA/BE a) model independent method for comparison of dissolution profiles b) sampling technique of biological fluid.

6+6+4+4 = 20