Ref no. Ex/Pharm/T/211/ 2019

B. PHARMACY SECOND YEAR FIRST SEMESTER EXAM 2019

PHARMACEUTICS III

Group A

Full marks 100

Time: Three hours

Answer any five taking at least one from each group

1. Explain why it is crucial not to use a determination of viscosity at one shear rate for non-Newtonian liquid. Explain how viscosity is determined using concentric cylinder viscometer with its relevant equations. What do you mean by creep (compliance) curve? Explain with one example. Why is it significant? Define storage modulus and loss modulus. What is called loss tangent? Give its significant. What is called Weissenberg effect? Define thixotrophy. Give the importance of hysteresis loop.

3+4+1+3+1+2+1+2+1+1+1 = 20

2. What do you mean by Bingham flow? What is called yield value? Write its significance. Differentiate "mobility" from "fluidity". Why is Dilatancy a problem for processing of dispersion and granulation of tablets? How will you determine viscosity by Ostwald U-tube viscometer? Give the relevant equations for calculation of viscosity by this method. Explain intrinsic viscosity with its significances. Explain when turbulent flow can be seen even with the value of Re < 2000.

2+2+2+3+3+3+3+2 = 20

3. Define complexation. Explain hybridization, orbital configuration, 3-D structure of the following complex moieties:

$[Cu\ (NH_3)_4]^{2+}$, $[Co\ (NH_3)_6]^{3+}$, $[Fe(CN)_6]^{3-}$,

What are chelates? Give one example in each case: monodentate chelate and natural chelate. Why does not alcohol dehydrogenase react with metal ions? Explain organo-molecular complexation with an example. What are inclusive compounds? Explain Klotz reciprocal plot and determine Scatchard plot and Sandberg equation from it.

1+6+2+1+2+1+7 = 20

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B. PHARMACY 2nd YEAR 1st SEMISTER EXAMINATION-2019

Subject: Pharmaceutics-III Time: 3hours Full Marks: 100

Group: B

Answer any five questions taking at least one from each group

Q4. a. What are organoleptic agents? (5)

b. Briefly discuss the following:

i. Sucralose, ii. Liquid glucose, iii. Caramel, iv. Lake dyes, v. Mottling of coloured compressed tablet? (5x3)

Q5. i. What are surfactants? Where these amphiphiles are utilized?

ii. Draw a scale to show the surfactant function and the basis of HLB values?

iii. How the HLB of polyhydric alcohol fatty acid esters may be estimated? (10+5+5)

Q6. i. Give five specific examples where the presence of surfactants may significantly Influence drug activity (10)

ii. Explain the science involve in micellar solubilization ? (5)

iii. Write short note on Zeta potential and suspension stability? (5)

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B. PHARM 2ND YEAR 1ST SEMESTER EXAMINATION, 2019

SUBJECT: PHARMACEUTICS – III
GROUP – C

7. What do you understand by 'Whisker Crystallization'? How does it occur? Enlist the various types of chemical degradation of drugs. With a suitable example explain degradation due to Hydrolysis. Give suitable example for amides, esters and benzodiazepines. Outline the steps to be undertaken for stabilization of drugs in relation to containers and closures. **3+2+3+3+3+6**

8. What is real time and accelerated stability studies? How accelerated stability studies are performed using Arrhenius equation? Schematically present the various studies undertaken in ICH Zone III and IV. Enlist the various functional changes in dosage forms with time and elaborate any two. **3+5+8+4**