Ref. No.: EX/BP103/2024

B. PHARMACY FIRST YEAR FIRST SEMISTER SUPPLEMENTARY EXAMINATION-2024

Subject: Pharmaceutics-I

Time: 3 hours Full Marks: 75

Answer any five questions taking at least one from each group

Group: A

1. Define suspensions. Classify suspension dosage form. What are the advantages of the suspension dosage form? What is the difference between gargle and mouth wash? Discuss douches. 2+4+3+2+4=15
2. Write short notes on any three of the following 5*3=15
   a) Flocculated and deflocculated suspensions
   b) Sedimentation parameters
   c) Syrup
   d) Types of suppositories.

Group: B

3. a. Discuss the mechanism and factor influencing dermal penetration.
   b. Write about any two base characteristics and use.
   c. What is gel? discuss the method of evaluation of it. 5+5+5=15

4. a. Write a formula of a semisolid and explain the different parts of it.
   b. Classify semisolid with an example.
   c. Write an example of each one i. gelling agent ii. Preservative iii. Humectant iv. Antioxidant v. perfume vi. Penetration enhancer. 5+5+5=15

Group: C

5. Define and classify emulsion type. Write various tests to identify types of emulsion. How can creaming of emulsion be prevented? Describe dry gum method.

An emulsion is prepared using the following formula:

Composition		HLB value of the chemical
Liquid paraffin	38%	12
Bees wax	1%	10
Cetyl alcohol	1%	15
Emulgent	7%	
Water, q.s.		

Using the blend of Sarbitan 80 (HLB 4.3) and Tween 80 (HLB 15) as emulgent, determine the formula of a stable emulsion of the above composition. 2+5+2+2+3 = 15

6. What is a prescription? Write about the parts of a prescription and their importance. Give the various years of publication of the IP. Give the English meaning of the following words:BD, modo dictum, BDPC, Per Os. Write Young's dose formula. Define

posology? Using Young's formula, please calculate the child dose of a child of 8 years old. Adult dose is 500 mg. 2+4+3+2+1+1+2 =15

Group: D

7. Answer any 3 of the following:
i) A solution contains 10 ppm (parts per million) active ingredient. Convert this strength into % (w/v).
ii) A solution that contains 819 mg of NaCl/100 ml has how many mEq of Na^+?
iii) By Alligation Alternate method calculate how much ml of 80% alcohol to be mixed with 300 ml of 30% alcohol to produce 70% alcohol.
iv) Find the concentration of sodium chloride required to render a 1.5% solution of procain hydrochloride iso-osmotic with blood plasma. [The freezing point of 1% (w/v) solution of procain hydrochloride is -0.122°C, and that of a 1% (w/v) solution of NaCl is -0.576°C].

8. A) Explain the following (any 3):
i) Sensitivity of an analytical balance.
ii) Minimum weighable amount.
iii) Alcohol dilution & related percentage & volume charges.
iv) Reverse osmosis
B) Explain different kinds of incompatibilities in prescription, along with their remedies.