KATHMANDU UNIVERSITY
End Semester Examination
February, 2025

Marks Scored:

Level : B.Pharm.
Year : III

Course : PHAR 327
Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date : 21-feb-025

SECTION "A"

[20 Q. × 1 = 20 marks]

Choose and encircle the most appropriate option from each set of choices

1. Which of the following statement regarding parenteral formulation is false.
   a. Parenteral formulations are sterile products.
   b. Parenteral formulations must be pyrogen-free.
   c. The majority of parenteral formulations for human administration are multidose formulations.
   d. The vehicle of choice for human parenteral formulations is water.

2. Simple syrup is a saturated solution of _____
   a. Sucrose b. Fructose c. Dextrose d. Galactose

3. Solutions are _____ dosage form
   a. Monophasic b. Biphasic c. Triphasic d. Solid

4. Thermodynamically system is stable when Gibbs/surface free energy is _____
   a. Maximum b. Minimum c. Constant d. Varies

5. Which of the following formulation components is not antimicrobial preservatives?
   a. Sodium benzoate b. Methylparaben
   c. Propylparaben d. Butylated hydroxytoluene (BHT)

6. Regarding buffers for pharmaceutical solutions for oral administration, which of the following statements are true?
   a. Citrate buffer is commonly used as a buffer for pharmaceutical solutions.
   b. Buffers are required solely to control the stability of therapeutic agents.
   c. Buffer salts does not affect the solubility of therapeutic agents.
   d. The buffer capacity of a buffer system is increased as the concentration of buffer components is increased.

7. _____ Is the study of dosage form design, including associated manufacturing techniques.
   a. Pharmaceutics b. Pharmacology c. Pharmacognosy d. Pharmacokinetics

8. Regarding the use of co-solvents for the formulation of pharmaceutical solutions for oral administration, which of the following statements is true?
   a. Co-solvents are required in all pharmaceutical solution formulations.
   b. Alcohols are commonly used as co-solvents in pharmaceutical solutions.
   c. Glycerol may directly affect the pH of the formulation.
   d. Co-solvents does not affect the viscosity of the solution formulation.

9. Regarding the rate of sedimentation of pharmaceutical suspensions designed for oral administration, which of the following statement is true?
   a. The rate of sedimentation is increased as the diameter of the dispersed drug particles is increased.
   b. The rate of sedimentation is increased as the viscosity of the continuous phase is increased.
   c. The rate of sedimentation is not affected by the concentration of buffer salts.
   d. The rate of sedimentation may be decreased by centrifugation.

10. Regarding the stability of pharmaceutical emulsions, which of the following statement is true?
   a. Emulsions are inherently pharmaceutically stable.
   b. The stability of pharmaceutical emulsions is not affected by the size of the dispersed phase.
   c. The stability of pharmaceutical suspensions is not affected by the concentration of dispersed phase.
   d. Phase volume of the internal phase directly affects the stability of pharmaceutical emulsions.

11. Leak test of pressurized pack is done at.....
   a. – 130°F under water
   b. – 130°F under colored water
   c. 130°F under water
   d. 130°F under colored water

12. Which among the following packaging material has advantage of chemical inertness?
   a. Glass b. Steel c. Tin d. Aluminum

13. Which among the following dip tube is suitable for actuation of spray type aerosol?
   a. Standard b. Large c. Jumbo d. Capillary

14. Which among the following will affect the spray pattern of aerosol?
   a. Type of actuator b. Gasket c. Container d. Propellant density

15. _____ packaging material has risk of poising.
   a. Tin b. Aluminum c. Lead d. Rubber

16. Which among the following is the most chemically inert glass?
   a. Type 0 b. Type I c. Type R d. Type NP

17. _____ is not synthetic rubber
   a. Latex b. Nitrile c. Neoprene d. Butyl

18. Separates inner eye into anterior and posterior chamber.
   a. Lense b. Ciliary body c. Iris d. Pupil

19. 90% of cornea thickness is from
   a. Epithelium b. Stroma c. Endothelium d. Keratocytes

20. Which of the following ophthalmic preparation should not contain preservatives?
   a. Ophthalmic Solutions
   b. Ophthalmic Suspensions
   c. Ophthalmic Ointments
   d. Retrobulbar injections

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Note: Check (√) the number of each question you have answered in the front page of main answer book (of Sections B, C and D).

SECTION "B"

[5 Q. × 3 = 15 marks]

Attempt ANY FIVE questions.

1. Mention three advantages and disadvantages of pharmaceutical solutions.
2. Describe "The Electrical double layer theory of Pharmaceutical Suspension with a figure. Mention two factors that affect this layer.
3. Describe any three (3) methods to determine types of emulsion.
4. Mention three (3) similarities and differences between human pharmaceutical dosage forms and veterinary dosage forms.
5. Write short note on ophthalmic suspension.
6. What advantages does mixing of propellent gives while preparing pressurized packs?
7. Write about the function of packaging.

SECTION "C"

[5 Q. × 5 = 25 marks]

Attempt ANY FIVE questions.

8. Describe five (5) reasons for choosing parenteral drug administrations.
9. Describe five (5) challenges for pharmacists to formulate veterinary dosage forms.
10. Describe chemical and physical instability of pharmaceutical emulsion. How you can protect them.
11. Describe chemical and physical instability of pharmaceutical suspension. How you can protect them.
12. Write about the various physiological factors that affects ophthalmic absorption of drugs.
13. Why and how spray test of pharmaceutical aerosol performed?
14. Write about the drug-plastic considerations one should make while selecting packaging material for packaging of pharmaceuticals.

P.T.O.

SECTION "D"

[2 Q. × 7.5 = 15 marks]

Attempt ANY TWO questions.

15. Describe the techniques by which you can enhance solubility of drug molecule.

16. Write in details on the requirements that must be considered while preparing ophthalmic preparations.

17. What are "Three phase" pharmaceutical aerosol system? How are they manufactured and evaluated for their quality?