

Level : B.Pharm.

Course : PHAR 404

Year : IV

Semester: I

Exam Roll No.:

Time: 30 mins.

F. M. : 20

Registration No.:

Date

JUN 13 2018

SECTION "A"

[20 Q.×1=20 marks]

- I. Check (✓) the correct answer of the following multiple choice questions:
- In tooling used in tablet compression punches are 5.25-inch long with 1-inch barrel diameter and 1.25-inch head diameter.
a. B b. BB c. D d. DB
 - Fluidized bed dryer is used for
a. Drying b. Granulation c. Mixing d. All of the above
 - Cross-linked polyvinylpyrrolidone is an example of
a. Binder b. Disintegrant c. Enteric coating d. Lubricant
 - Decrease in moisture content of empty capsule below 10% can render the capsule
a. Brittle b. Flexible c. Sticky d. Color loss
 - Maximum filling capacity of `size 2` empty capsule is approximately mL
a. 0.55 b. 0.4 c. 0.3 d. 0.25
 - The most widely used film coating material is:
a. ethyl cellulose b. cellulose acetate phthalate.
c. microcrystalline cellulose d. hydroxypropylmethylcellulose
 - is used in preparation of gasket for pharmaceutical pressurized packs.
a. Nylon b. Delrin c. Neoprene d. Polyethylene
 - Which of the following propellant regarding pMDI sprays has highest impact force
a. Trichloromonofluoromethane (P-11) b. Dichlorodifluoromethane (P-12)
c. Butane (A-17) d. Propane (A -108)
 - gives highest resistance to alkalis.
a. Nitrile polymers b. Polypropylene c. Polystyrene d. Polyvinyl chloride
 - gives highest resistance to impact.
a. Nitrile polymers b. Polypropylene c. Polystyrene d. Polyvinyl chloride
 - For weak acids, a decrease in pH results in a/an _____ in solubility.
a. Decrease b. Increase c. No effect d. a followed by b

12. In Dissolution (Fick's First law) Diffusion coefficient (D) will be increased by
- Increasing viscosity of bulk
 - Decreasing viscosity of bulk
 - Using salt form of drug
 - Decreasing diffusion layer thickness
13. Differential scanning calorimetry is useful for determining the
- Melting temperature, glass transition temperature, heat of fusion etc
 - Volatilities of plasticizers and other additives
 - Quantitative determination of additives in polymers
 - Structural imperfections
14. Regarding the use of co-solvents for the formulation of pharmaceutical solutions for oral administration, which of the following statements is true?
- Co-solvents are required in all pharmaceutical solution formulations.
 - Alcohols are commonly used as co-solvents in pharmaceutical solutions.
 - Glycerol never directly affect the pH of the formulation.
 - Co-solvents may affect the viscosity of the solution formulation.
15. Flocculated suspensions exhibit the following properties:
- A low sedimentation volume.
 - A high degree of flocculation.
 - A high rate of sedimentation.
 - Homogeneity of drug concentration per unit dose.
16. Concerning the physical properties of emulsions, which of the following statements are true?
- Water in oil emulsions conduct electrical current.
 - Water in oil emulsions are more stable than oil in water emulsions.
 - High-speed mixing of water in oil emulsions results in dilatant flow.
 - The particle size distribution of the internal phase may be reduced post manufacture using a colloid mill.
17. The long lasting veterinary dosage form is used to
- Increase patient compliance
 - Minimize animal handling and to reduce stress to animal
 - To improve efficiency of therapy.
 - To reduce dosing frequency
18. BCS class II drug means
- | | |
|---------------------------------------|--------------------------------------|
| a. High solubility; high permeability | b. Low solubility; high permeability |
| c. High solubility; Low permeability | d. Low solubility; Low permeability |
19. Which of the following is not a Methods of characterization of polymorphs.
- | | |
|-------------------------------------|-----------------------------------|
| a. Hot stage microscopy, | b. Differential Thermal Analysis, |
| c. Thermogravimetric Analysis (TGA) | d. Microplate reader |
20. Carrs Consolidation index 5-10% means Flow property.
- | | | | |
|--------------|---------|---------|---------|
| a. Excellent | b. Good | c. Fair | d. Poor |
|--------------|---------|---------|---------|

KATHMANDU UNIVERSITY
End Semester Examination [C]
June 2018

JUN 13 2018

Level : B.Pharm.
Year : IV
Time : 2 hrs. 30 mins.

Course : PHAR 404
Semester: I
F. M. : 55

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]

II. Answer any FIVE questions:

1. Mention the processing steps commonly required in tableting by wet granulation method.
2. Write a short note on "Non-gelatin capsules".
3. Write down the formulation of 'Quick-Breaking Foam'. Mention the function of each ingredient.
4. Write about the materials that can be used for preparation of collapsible tubes for packaging of pharmaceuticals preparations.
5. During Preformulation how you decide whether you can make ready to use aqueous solution or not of New chemical entity (NCE)?
6. What are the Advantages and disadvantages of pharmaceutical solutions for oral administration?
7. What are the disadvantages of pharmaceutical ointments?

SECTION "C"

[5 Q. × 5 = 25 marks]

III. Answer any FIVE questions:

8. Discuss on the formulation-based and compression machine-based factors that causes weight variation of tablets.
9. Briefly explain the capsulation process of soft gelatin capsules by using rotary die process.
10. Write in detail about the functions of propellant in pharmaceutical aerosol.
11. What are the purposes of long lasting veterinary dosage form ?
12. If you discover new chemical entities (NCE) in lab. What will be your first step in preformulation and why?
13. Discuss the Excipients used in pharmaceutical emulsions.

14. In which angle veterinary formulation is more challenging than formulation of human dosage for?

SECTION "D"

[2 Q. × 7.5 = 15 marks]

- IV. Answer any *TWO* questions:

15. Mention the process variables that are to be controlled in pan-spray film coating process. Discuss how these process variables can result in film defects. [2.5+5]
16. Mention strength, limitations and pharmaceutical application of following packaging materials.
- a. High density polyethylene [4]
 - b. Polyvinyl Chloride [3.5]
17. Describe the flow chart of formulation approaches or how you decide to go with particular dosage form for drug molecule?