APR 0 7 2017

KATHMANDU UNIVERSITY
End Semester Examination
March/April 2017

Mark scored:

Level : B.Pharm.
Year : IV

Course : PHAR 404
Semester: I

Exam. Roll No. :

Time : 30 mins.

F.M. : 20

Registration No,:

Date :

SECTION "A"
[20 Q.×1=20 marks]

I. Circle the best answer of the following multiple choice questions:

1. Moisture content in finished hard gelatin capsules is maintained between:
   a. 6-10 %
   b. 9-12 %
   c. 13-16 %.
   d. 15-20%

2. As per Biopharmaceutical Classification System, largest dose of Class I drug dissolves in ..... ml of pH 1-8 media at 37°C and ..... % of drug gets absorbed.
   a. ≤250, ≥ 75
   b. ≤250, ≥ 90
   c. ≤900, ≥ 75
   d. ≤900, ≥ 90

3. Which of the following types of formulation cannot be filled in soft gelatin capsules?
   a. W/O emulsion
   b. Volatile drugs
   c. Highly efflorescent drug
   d. Both a and c

4. ..... is an example of water soluble diluent.
   a. Lactose
   b. Shellac
   c. Dibasic calcium phosphate
   d. Ethyl cellulose

5. Most efficient drying of wet solid occurs at.....
   a. Constant rate period
   b. First falling rate period
   c. Second falling rate period
   d. After equilibrium moisture content

6. Planetary mixer is most suitable for preparation of.....
   a. Suspension
   b. Emulsion
   c. Ointment
   d. Granules

7. ..... can be used for preparation of granules
   a. Spray dryer
   b. Diosna mixer
   c. Planetary mixer
   d. Any of above

8. ..... dryer is an example of material agitated, continuous type dryer
   a. Belt
   b. Vacuum tumble
   c. Pan
   d. Flash

9. Addition of polyethylene glycol in the formulation might be beneficial in case of.....
   a. Capping
   b. Sticking
   c. Mottling
   d. Rat holing

10. An ideal enteric polymer should dissolve or become permeable near and above pH.....
    a. 4
    b. 5
    c. 7
    d. 8

11. ..... is NOT an example of enteric film former.
    a. Shellac
    b. Cellulose acetate phthalate
    c. Cellulose acetate trimellitate
    d. Polyvinyl phthalate

12. .....solid dissolves and saturates a thin film of water on its surface.
    a. Hygroscopic
    b. Very hygroscopic
    c. Deliquescent
    d. Efflorescence

13. Surfactant blends with HLB value of ..... is preferred for making O/W emulsions
    a. 1 to 3
    b. 4 to 6
    c. 7 to 9
    d. 8 to16

14. Emulsifier with .....pH is not suitable for topical formulation
    a. Alkaline
    b. Acidic
    c. Neural
    d. Any

15. If a drug shows polymorphism, then for suspension we require ..... polymorphism.
    a. Stable
    b. Metastable
    c. Unstable
    d. Any

16. Preparation of emulsion using hard water might cause
    a. Phase inversion
    b. Creaming
    c. Sedimentation
    d. Flocculation

17. Tag Open Cup Apparatus is used to determine.....
    a. Flame projection
    b. Flash point
    c. Vapor pressure
    d. Spray pattern

18. In cold filling process of pharmaceutical aerosol
    a. It is applicable to aqueous product only
    b. Active ingredients should withstand temperature as low as -40°C
    c. Propellant and concentrate are mixed and chilled to -40°F.
    d. The chilled product are added into a previously valve crimped container.

19. Term 'leaching' is used to describe migration of ..... from ..... to drug product.
    a. gas, atmosphere
    b. dyes, drug product
    c. dyes, container
    d. gas, container

20. ..... provides very good resistance to acids.
    a. Acrylic multi polymer
    b. Nitrile polymer
    c. Polyethylene
    d. Polyvinyl chloride

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APR 07 2017

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 of Section B, C and D you have answered in the front page of main answer book. Unnecessary writing will deduct your marks.

SECTION "B"

[5Q.×3=15 marks]

II. Answer *ANY FIVE* questions:

1. What is anhydrous lactose? Mention its pharmaceutical application.
2. Write a short note on "Mouth-dissolving tablet".
3. Draw a well-labeled diagram of any one type of perforated pan based coating equipment.
4. Write about the materials that are used for preparation of non-gelatin capsules.
5. Write about the tests that are performed for identification of emulsion type.
6. Briefly describe the manufacturing of pharmaceutical aerosol by cold filling method.
7. What are feed additives? Mention its advantages and limitations.

SECTION "C"

[5Q. × 5=25 marks]

III. Answer *ANY FIVE* questions:

8. Why polymorphism study of a drug is important during preformulation study. List out the tools that are used for polymorphism study
9. Describe how you will perform disintegration test of uncoated conventional tablets. Discuss on possible results and acceptance or rejection criteria.
10. List the film defects that you might face in film coating. Write about the source and suitable approaches for remedy of the defects.
11. Write about the various physical, chemical and biological tests that are performed for evaluation of pressurized packages.
12. Write about the various factors that affects penetration rate of drug through human skin.
13. Why vortex formation is not desired during mixing of liquids? Give your approach for preventing it?
14. Suggest a suitable plastic resin that can be used for packaging of 'Dry Syrup'. Mention strength and weakness of the resin.

SECTION "D"

[2 Q. × 7.5=15 marks]

IV. Answer *ANY TWO* questions:

15. What pharmaceutical benefits do granulation of powder gives? Write about different methods and related granulators used for preparation of granules. Discuss on various aspects that you should consider while selecting granulation methods.
16. Briefly describe the operation steps of tablet compression machine. Write about the process variables related to the machine and formulation that must be properly controlled in order to achieve minimum weight variation of compressed tablets.
17. Write about the physical properties that you seek in a pharmaceutical suspension. Give your reasons. Write down the formulation ingredients that are required for preparation of pharmaceutical suspension. Discuss on the function of each ingredients.