

KATHMANDU UNIVERSITY
End Semester Examination
July/August, 2024

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

09 AUG 2024

Course : PHAR 321
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]

Attempt ANY FIVE questions.

1. What is "mottling" problem in tablets?
2. At which step of tablet manufacturing by wet granulation, disintegrant is added? Why?
3. How soft gelatin capsules are prepared by the bubble method.
4. What is coacervation phase separation technique?
5. Write down the difference between Hicoater and Driacoater.
6. What are ointments?
7. Write down the differences between leads and drug candidates.

SECTION "C"

[5 Q. × 5 = 25 marks]

Attempt ANY FIVE questions.

8. Write short note on "Pharmaceutical application of starch".
9. Why and how granules are prepared by dry granulation method?
10. How hard gelatin capsule shells are manufactured?
11. What is solvent evaporation method? How microcapsules are prepared using it?
12. Prepare a formulation for film coating solution. Explain the use of each ingredient.
13. Write about the factors that affects permeability of a drug through skin.
14. What is preformulation study? How is it done?

P.T.O.

SECTION "D"
[2 Q. × 7.5 = 15 marks]

Attempt ANY TWO questions.

15. List out the major components of multi-station rotary tablet compression machine. What are their functions? Explain how each of these components affects quality of tablet?
16. Enlist the various coating film defects of tablets. Explain how the different components of tablet coating affects the film defect.
17. What are semisolid preparations? Write about the components that are used in formulation of creams. Explain the use of each ingredient. How is it manufactured?

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Registration No.:

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SECTION "A"

[20 Q. × 1 = 20 marks]

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

- Which one of the following excipients is not preferred for direct compression of tablet?
a. Dibasic calcium phosphate b. Lactose monohydrate
c. Microcrystalline cellulose d. Spray dried lactose
- Powder feed rate can be adjusted in a tablet compression machine by adjusting
a. Upper pressure roller b. Lower pressure roller
c. Weight adjustment knob d. Hopper to feed frame distance
- Which of the following stages of wet granulation has highest pore volume occupied by air?
a. Droplet b. Capillary c. Funicular d. Pendular
- High moisture content in powder may cause _____ problem during tableting.
a. bottling b. binding c. chipping d. mottling
- Which among the following tooling produces smallest tablet?
a. B b. BB c. D d. DB
- Highest drying rate is achieved at _____
a. Constant rate period b. First falling rate period
c. Second falling rate period d. EMC
- Type A gelatin is obtained by
a. Acid hydrolysis of animal bone b. Acid hydrolysis of pork skin
c. Alkaline hydrolysis of animal bone d. Alkaline hydrolysis of pork skin
- Function of vacuum in semi-automatic hard gelatin capsule filling machine is
a. Filling of capsule shell b. Joining of capsule shell
c. Opening of capsule shell d. Rectification of capsule
- Sorbitol in soft gelatin capsules is used as
a. Gelatin diluter b. Moisturizer c. Plasticizer d. Vehicle
- Hard gelatin capsule shells with moisture content below 10% are
a. Brittle b. Flexible c. Sticky d. Color loss
- Which among the following solvent is not desirable for coating purpose?
a. Acetone b. Ethanol c. Hexane d. Methanol

12. In fluid pressurized coating-spray system, degree of atomization is not controlled by _____
- a. Coating fluid pressure
 - b. Viscosity of fluid
 - c. Compressed air pressure
 - d. Orifice size
13. Which of the following ingredient in the coating formulation is used as opacifier?
- a. CAP
 - b. HPMC
 - c. PEG
 - d. TiO₂
14. Which among the following is NOT an example of enteric coating polymers
- a. Methacrylate
 - b. Polyethylene terephthalate
 - c. Polyvinyl acetate Phthalate
 - d. Shellac
15. Appearance of white speck at the surface of film coated tablet is called as
- a. Blistering
 - b. Blushing
 - c. Bridging
 - d. Hazing
16. Which among the following is not an objective of microencapsulation?
- a. Taste masking
 - b. Release modification
 - c. Protection
 - d. Size reduction
17. Evaporation rate of a coating solvent is least in _____ method
- a. Fluidized bed
 - b. Solvent evaporation
 - c. Spray congealing
 - d. Spray drying
18. Carbopol is generally used in formulation of _____
- a. Cream
 - b. Gel
 - c. Paste
 - d. Ointment
19. Which of the following semisolid preparations mostly contain least amount of water?
- a. Cream
 - b. Gel
 - c. Paste
 - d. Ointment
20. Compatibility with excipients is performed in _____ stage.
- a. Early discovery
 - b. Late discovery
 - c. Early development
 - d. Late development