

KATHMANDU UNIVERSITY
End Semester Examination
May/June, 2023

Marks Scored:

Level : B.Pharm.

Year : IV

Exam Roll No. :

Time: 30 mins.

Course : PHAR 414

Semester : II

F. M. : 20

Registration No.:

Date : 30.May-2023

SECTION "A"
[20Q. × 1 = 20 marks]

Encircle the most appropriate alternative from each set of choices.

1. Total cost in inventory management means
 - a. Sum of ordering cost and demand cost
 - b. Sum of carrying cost and labour cost
 - c. Sum of carrying cost and burden
 - d. Sum of carrying cost and ordering cost
2. metre/sec is the air velocity of horizontal laminar air flow as per WHO.
 - a. 0.30
 - b. 0.25
 - c. 0.45
 - d. 0.50
3. WHO recommend % of Fresh air normally in HVAC.
 - a. 10
 - b. 15
 - c. 20
 - d. 50
4. Time between placement of order and arrival of order is called time.
 - a. Lag
 - b. Lead
 - c. Delay
 - d. Delivery
5. is not an inventory.
 - a. Granules awaiting for compression
 - b. Finished product
 - c. Tablet Compression machine
 - d. starch for tablet manufacturing
6. is not among 5Ms involved in a PLANT that ultimately give product.
 - a. Money
 - b. Man
 - c. Method
 - d. Motion
7. In water purification system, UV irradiation is kept ozone generator.
 - a. before
 - b. after
 - c. with
 - d. alternative to
8. filter has the lowest filtration efficiency.
 - a. Primary panel
 - b. Secondary Panel
 - c. HEPA
 - d. Ternary
9. conveyer is not suitable for dry powder transportation.
 - a. Belt
 - b. Roller
 - c. Pneumatic
 - d. Chain
10. Coating solvents cause pollution to
 - a. underground water
 - b. land
 - c. air
 - d. surface water

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End Semester Examination
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30. May - 023
Course : PHAR 414
Semester: II
F.M. : 55

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

SECTION "B"
[5Q. × 3 = 15 marks]

Attempt *ANY FIVE* questions.

1. What do you understand by 'Material handling' and "transportation"? If you have to transport corrosive and viscous fluid which pump you have to use and why?
2. Make an outline/operation process chart and process flow chart of tablet manufacturing process.
3. Mention the procedural steps of Method study.
4. What are Delayed release and Repeat action tablets?
5. What is antisense therapy?
6. List out the ingredients that are used in formulation of intravenous parenteral preparations. Write their function.
7. Why buffer capacity is important to maintain in ophthalmic preparations?

SECTION "C"
[5Q. × 5 = 25 marks]

Attempt *ANY FIVE* questions.

8. Differentiate between "Unit operation" and "Process". Out of followings separate into respective categories (Unit operation & process):

a. Tablet manufacturing	g. Filtration
b. Mixing	h. Fluid flow
c. Drying	i. Sterilization
d. Capsule making	j. Crystallization
e. Granulation	
f. Oral liquid preparation	
9. Draw the schematic diagram of HVAC and mention their components and their function.
10. Pharmaceutical company is using stream water as a source of water. Describe with schematic figure how they have to be treated to use as a purified water.
11. Draw a well labeled diagram of Osmotic pump. Explain its working mechanism.
12. Write about the requirements for particulate matters in parenteral preparations.
13. Write short note on "Pharmaceutical applications of microcapsules".
14. Write in detail about the various factors that affects absorption of drug instilled in eye.

SECTION "D"

[2Q. × 7.5 = 15 marks]

Attempt *ANY TWO* questions.

15. What do you mean by "pilot plant" and "scale up"? Describe general consideration you have to be taken during pilot plant scale up.
16. What are adenoviruses? Describe how adenovirus vector is constructed for gene therapy. How the construct delivers therapeutic gene?
17. Prepare a list of various microencapsulation techniques used for preparation of microcapsules. Write in detail about the physical methods used for microencapsulation.