

KATHMANDU UNIVERSITY
End Semester Examination
August, 2019

Marks Scored:

Level : B. Pharm.
Year : I

Course : PHAR 111
Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date : AUG 16 2019

SECTION "A"
[20 Q × 1 = 20 marks]

Check (✓) the correct answer/s of the following multiple choice questions:

- Which one of the following is not the name of referencing system?
[a] Vancouver [b] Harvard [c] APA [d] Paris
- Which one of the following statements on "Extraction" is incorrect?
[a] The insoluble matrix remaining after extraction is known as marc.
[b] Extraction is the method of removal of a soluble fraction in the form of a solution from an insoluble matrix with the help of a suitable solvent
[c] The soluble components may be present as solid only.
[d] The insoluble matrix may be in the powder form.
- Drug act of Nepal was promulgated in the yearA.D.
[a] 1976 [b] 1977 [c] 1978 [d] 1979
- Mesh size of 200 refers to.....
[a] 200 holes in 1 inch square area [b] 100 holes in 1 inch square area
[c] 100 holes in 1 inch longitudinal line [d] 200 holes in 1 inch longitudinal line
- The first reference on use of allopathic medicine in Nepal is available during the time of King
[a] Ranjit Malla [b] Ram Shah
[c] Prithivi Narayan Shah [d] Siddhi Narsingh Malla
- Which statement about the scope of pharmacy is incorrect?
[a] Compounding is one of the main field of pharmacy
[b] It is related to the provision of drug related information to the public
[c] Drug utilization review and drug product selection
[d] Diagnosing disease as the medical doctor does
- "Material Medica" is an encyclopedia of drugs from
[a] Israel [b] Greece [c] Egypt [d] Iraq
- Which one of the statements on basic actions of size reduction equipment is incorrect?
[a] Roller uses a heavy rolling member to crush and pulverize the material
[b] Impact involves the operation of hammers (or bars) at low speeds
[c] Attrition action breaks down the material by a rubbing action between two surfaces
[d] Impact causes large particles to split apart, the action continuing until small particles of required size are produced

9. Which of the following statements related to comminution is incorrect?
[a] Size reduction is necessary for uniform distribution of color and to introduce mottling effect
[b] Size influences the texture, taste and rheology of oral suspension and absorption.
[c] The rate of material drying can be facilitated by comminution
[d] Rate of most chemical and physical reaction is increased due to size reduction
10. Bachelor in Pharmacy program was introduced in Nepal for the first time byUniversity in the year.....
[a] Pokhara , 2000 A.D
[c] Kathmandu, 1994 A.D
[b] Pokhara, 2005 A.D
[d] Kathmandu, 1996 A.D
11. The advantage of soft gelatin capsule includes all except:
[a] difficult to swallow
[c] plasticizers are added
[b] looks elegant
[d] powders are filled
12. The main difference between creams and ointments is
[a] Creams are thicker than ointments
[b] Ointments are thicker than creams
[c] Creams are emulsions whereas ointments are suspensions
[d] Creams are aqueous solutions whereas ointments are oily solutions
13. Propyl paraben is used as
[a] Binder
[b] Lubricant
[c] Preservative
[d] Anti-oxidant
14. The liquid injected into the rectum through anus for cleansing, stimulating evacuation of the bowel, or other therapeutic or diagnostic purposes is known as
[a] Enema
[b] Suppository
[c] Pessary
[d] Implant
15. How many grams of Potassium Permanganate (KMnO_4) must be taken in producing 1L of 1:3000 ratio strength solution?
[a] 0.3 g
[b] 3g
[c] 30 g
[d] 300 g
16. The conversion factor to change milligram to microgram is
[a] 1 mg /1000 μg
[b] 2.20 lb/ 1 kg
[c] 1 mg/ 100 μg
[d] 100 μg / 1 mg
17. How many milliliters of water must be added to 250 ml of 50% alcoholic solution to make a 40% alcoholic solution?
[a] 310 ml
[b] 311.5 ml
[c] 312.5 ml
[d] 375 ml
18. An IV injection is desirable when
[a] rapid action is required
[c] drug is to be released slowly
[b] prolonged action is required
[d] larger dose is to be administered
19. The ideal osmolarity of 0.9% sodium chloride injection is:
[a] 367
[b] 380
[c] 478
[d] 308
20. How many milliequivalents of magnesium sulfate are represented in 1g of anhydrous magnesium sulfate (MgSO_4)?
[a] 14.7
[b] 17.7
[c] 16.7
[d] 19.7

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AUG 16 2019
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Level : B. Pharm.
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Time : 2 hrs. 30 mins.

Indicate by checking (✓) of each question you have answered in the cover page of main answer book.

SECTION "B"

[5Q. × 3 = 15 marks]

Answer *ANY FIVE* of the following questions.

1. Define the following terms:
 - a. "Drug" as per "Drug act 2035 of Nepal"
 - b. Pharmacopoeia
 - c. HINARI
2. Draw a well labeled stress-strain diagram for solid and describe the graph.
3. What are the objectives and applications of size reduction?
4. Convert:
 - a. 2 hectolitre (hL) to deciliter(dL)
 - b. 4 gallon US to litre
 - c. 5 grain (gr) to gram
5. Write short note on the following topics. (any two)
 - a. Suspension
 - b. Syrup
 - c. Emulsion
6. Define dose and dosage form. Classify dosage form.
7. Define
 - a. Sensitivity requirement
 - b. Preservatives
 - c. Disintegrants

SECTION "C"

[5Q. × 5 = 25 marks]

Answer *ANY FIVE* of the following questions.

8. Define professionalism. Develop a code of ethics for pharmacist in Nepal. Do you think Nepalese pharmacist will be able to follow it in practice setting? Justify.
9. Discuss on Noyes-Whitney equation and theory of extraction.
10. Define comminution. Discuss on size reduction equipment.
11. Define capsule and classify it. What are the advantages and disadvantages of capsule over other dosage forms?

12. A torsion prescription balance has a sensitivity requirement of 4 milligrams. Explain how you would weigh 5 milligrams of hydromorphone hydrochloride with an error not greater than 5%. Use lactose as the diluent.
13. Explain ideal characteristics of preservatives.
14. Glycerin, USP (specific gravity 1.25) costs Rs 540.25 per pound. If a student in the dispensing laboratory use 1 pint of glycerin in preparing compounded prescriptions, what is the cost of the glycerin used? (1 pint = 473.176473 ml)

SECTION "D"

[2Q. × 7.5 = 15 marks]

Answer ANY *TWO* of the following questions.

15. Pharmacy has been an ever-changing field. Nepal does not has long history of pharmacy education and practice. Discuss on evolution of pharmacy in the world. Has Nepal been able to cope up with the changing scenario in pharmacy field? Justify.
16. Suppose, a particular extraction proceeds with a distribution coefficient of 10. The system consists of 5.0 g of organic compound dissolved in 100 ml of water (solvent 1). Prove the effectiveness of three 50 ml extractions with diethyl ether (solvent 2) compared with one 150 ml extraction with ether.
17. What is tablet? What are the different additives used in tablet formulations? Mention the types of tablet. What are the advantages and disadvantages of tablets over other dosage forms?