

KATHMANDU UNIVERSITY
End Semester Examination
May/June, 2022

Marks Scored:

Level : B.Pharm.

Year : II

Exam Roll No. :

Time: 30 mins.

Registration No.:

Course : PHAR 221

Semester : II

F. M. : 20

Date :

SECTION "A"

[20Q. × 1 = 20 marks]

Encircle the most appropriate answer.

1. All are the uses of astringent agent **EXCEPT**
 - a. Anti-inflammatory
 - b. Anti-precipitant
 - c. Anti-perspirant
 - d. Anti-microbial

2. Aluminium hydroxide is prepared by hot solution of slowly with constant stirring to a hot solution of sodium carbonate.
 - a. Aluminum alum
 - b. Potash alum
 - c. Potassium alum
 - d. Hydrochloric Acid

3. Chemical formula of Borax is
 - a. $\text{Na}_2\text{B}_4\text{O}_7 \cdot 12\text{H}_2\text{O}$
 - b. $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$
 - c. $\text{Na}_2\text{B}_4\text{O}_7 \cdot 14\text{H}_2\text{O}$
 - d. None of these

4. In limit test for iron Ferrous thioglycolate has stable pink to reddish purple color in medium.
 - a. Alkaline
 - b. Buffer
 - c. Acidic
 - d. Neutral

5. Iodine is soluble in
 - a. Potassium iodide
 - b. Water
 - c. Alcohol
 - d. Boiling water

6. Potassium iodide act as anti-microbial agent by the one of the following mechanism.
 - a. Halogenation
 - b. Oxidation
 - c. Reduction
 - d. Precipitation

7. Preparation of Hydrogen peroxide by the following method **EXCEPT**
 - a. Barium peroxide
 - b. Potassium Peroxide
 - c. Sodium Peroxide
 - d. Sulphuric electrolysis

8. Soapstone is also known as
 - a. Hydrogen Peroxide
 - b. Kalion
 - c. Zinc Oxide
 - d. Talc

9. The composition Lugol's Solution is..... % w/w of I_2 .
 - a. 10
 - b. 8
 - c. 5
 - d. 7

10. Ringer's solution typically contains:
 - a. NaOH , KOH , $\text{Ca}(\text{OH})_2$ and NaHCO_3
 - b. NaCl , KCl , CaCl_2 and KHCO_3
 - c. NaCl , KCl , CaCl_2 and NaHCO_3
 - d. NaCl , KCl , CaCl_2 and $\text{Ca}(\text{HCO}_3)_2$

11. is assayed by Mohr's method.
- | | |
|------------------------|----------------------|
| a. Sodium Chloride | b. Silver Nitrate |
| c. Potassium hydroxide | d. Hydrogen Peroxide |
12. can be used for treatment of acute cyanide poisoning.
- | | |
|-----------------------|-------------------|
| a. Activated Charcoal | b. Iron Sulfate |
| c. Silver Nitrate | d. Sodium nitrite |
13. Limit test for heavy metal is based on the reaction of metal ion with
- | | |
|----------------------|----------------------|
| a. Hydrogen sulphide | b. Dithizone |
| c. Hydroxylamine | d. Potassium Cyanide |
14. assayed by Volhard method.
- | | |
|------------------------|--------------------|
| a. Hydrogen Peroxide | b. Silver Nitrate |
| c. Potassium hydroxide | d. Sodium Chloride |
15. Its sterile water for injection with 0.9% benzyl alcohol is used is called
- | | |
|---------------------------------------|---------------------------------|
| a. Sterile purified water | b. Sterile water for irrigation |
| c. Bacteriostatic water for injection | d. Sterile water for inhalation |
16. The radiation with high penetration power and low ionizing power is
- | | | | |
|-------------------|------------------|-------------------|----------------------|
| a. Alpha particle | b. Beta particle | c. Gamma particle | d. None of the above |
|-------------------|------------------|-------------------|----------------------|
17. The..... cathartics act by local irritation on the intestinal tract.
- | | | | |
|--------------|--------------|-----------------|-----------|
| a. Stimulant | b. Emollient | c. Bulk foaming | d. Saline |
|--------------|--------------|-----------------|-----------|
18. Iodine is prepared from
- | | |
|------------------------------|--------------------------------|
| a. <i>Laminaria digitata</i> | b. <i>Laminaria saccharina</i> |
| c. <i>Laminaria algae</i> | d. <i>Laminaria latissimi</i> |
19. Epsom salt is also known as
- | | |
|-----------------------|-----------|
| a. Hydrogen Peroxide | b. Kalion |
| c. Magnesium sulphate | d. Talc |
20. Sodium bisulfite can be assayed bytitration
- | | |
|-----------|-------------------|
| a. Redox | b. Complexometric |
| c. Iodine | d. Acid-base |

KATHMANDU UNIVERSITY
End-Semester Examination
May/June, 2022

Level : B.Pharm.
Year : II ³⁰
Time : 2 hrs. 20 mins.

Course : PHAR 221
Semester : II
F.M. : 55

SECTION "B"
[5 Q. × 3 = 15 marks]

Answer *ANY FIVE* questions.

1. What are protective absorbents? What is their mode of action?
2. How inadequate and improper storage affects the purity of pharmaceuticals?
3. Give brief account on glass.
4. Give brief account on water.
5. Discuss the classification of antidotes with examples.
6. Write a short note on:
 - a. Nitrogen
 - b. Iron
7. Define the terms:
 - a. Bactericidal
 - b. Disinfectant
 - c. Bacteriostatic

SECTION "B"
[5 Q. × 5 = 25 marks]

Answer *ANY FIVE* questions.

8. The major metals of potential health concern found in food, drugs (medicines), and dietary supplements are lead, cadmium, mercury, and arsenic. Other metals, such as chromium, copper, manganese, molybdenum, vanadium, nickel, osmium, rhodium, ruthenium, iridium, palladium and platinum, may be used or introduced during manufacturing and may be controlled in the final article as impurities. Screening for metals in medicines and dietary supplements rarely indicates the presence of toxic metal impurities at levels of concern. The setting of heavy metal limits is appropriate for medicines and is appropriate for supplements when heavy metals are likely or certain to contaminate a given product. Explain the method of screening heavy metal contaminations in pharmaceuticals?
9. A pharmaceutical is manufacturing a Morphine syrup which is susceptible to oxidation. What type of excipient you add in above formulation to prevent oxidation? Justify. Mention the name the excipient used above. Explain the important criteria you would consider while selecting the excipient. [1+1+3]

10. A person accidentally took cyanide in his food. He is unconscious due to cyanide poisoning and is admitted in the hospital for the treatment. Suggest two inorganic antidotes for his treatment with its mechanism of action. [2.5 + 2.5]
11. A pharmaceutical is manufacturing antacid. The formulator is confused in selecting the proper formulation of antacid. Please suggest the requirements for good antacid formulation to the formulator.
12. Give brief account on therapeutic and diagnostic application of radiopharmaceuticals.
13. List out the compounds assayed by gravimetric method. Explain the method in detail along with its uses.
14. Classify cathartics. Explain assay and preparation of Epsom Salt.

SECTION "C"
[2 Q. × 7.5 = 15 marks]

Answer *ANY TWO* questions.

15. What is meant by oral rehydration therapy? Describe electrolyte combination therapy. Make list of sodium chloride formulations used in electrolyte replacement therapy. Explain formulation, preparation and assay of ORS.
16. What are antimicrobial agents? Classify them with examples. Explain their mechanism of action. Explain preparation and assay of Iodine.
17. Presence of Impurities in the pharmaceutical substances may produce toxic effects on the body and may also lower down the active strength of the pharmaceutical substance. Explain sources of such impurities in detail. Make list of test for purity used in screening those impurities