KATHMANDU UNIVERSITY
End Semester Examination
July/August, 2024

Marks Scored:

Level : B.Pharm.
Year : II
Course : PHAR 221
Semester : II
Exam Roll No. :
Time: 30 mins.
F. M. :20
12 AUG 2024
Registration No.:
Date :

SECTION "A"
[20 Q. × 1 = 20 marks]

Choose and encircle the most appropriate option.

1. As per new WHO ORS formula glucose contributes _____ mOsmol/liter of osmolarity.
   a. 10 b. 15 c. 65 d. 75

2. Blue vitriol is
   a. $CaSO_4.2H_2O$ b. $CuSO_4.5H_2O$ c. $ZnSO_4.7H_2O$ d. $MgSO_4.2H_2O$

3. The limit test for arsenic involves the reduction of arsenic compounds to:
   a. Arsine gas (AsH_3) b. Arsenic metal
   c. Arsenic acid d. Arsenate ion

4. Milk of magnesia is
   a. Hydrated magnesium silicate b. Hydrated magnesium oxide
   c. Dehydrated magnesium hydroxide d. Hydrated magnesium hydroxide

5. Which one is used as standard substances for limit test of sulphate?
   a. Iron sulphate b. Magnesium sulphate
   c. Potassium sulphate d. Sodium sulphate

6. IP classification of pharmaceutical impurities does not consider
   a. Inorganic impurities b. Organic Impurities
   c. Ordinary Impurities d. Residual solvents

7. In the cyanide poisoning sodium nitrite acts as
   a. Chemical antidotes b. Physiological antidotes
   c. Mechanical antidotes d. Physical antidotes

8. Mandl's Paint contains _____ solution of iodine in glycerin.
   a. 10% w/v b. 5% w/v c. 2.5% w/v d. 1.25% w/v

9. Dilute nitric acid is used as acidifying agent in impurity test for:
   a. Arsenic b. Iron c. Chloride d. Sulphate

10. Laxatives are the drugs used to
   a. Relieve acidity b. Relieve constipation
   c. Reduce gastrointestinal irritations d. All of the above

11. Is not the function of ammonium chloride
    a. Antacid
    b. Diuretic
    c. Expectorant
    d. Maintain acid base balance

12. Rochelle salt contains not less than 99.0% and not more than ___ % of $C_4H_4O_6Na.K.4H_2O$.
    a. 101.0
    b. 102.0
    c. 103.0
    d. 104.0

13. Sodium meta bisulphite is incompatible with _____
    a. Oxidizing agent
    b. Strong acid
    c. Strong alkali
    d. All of the above

14. The radiation with high penetration power and low ionizing power.
    a. Alpha particle
    b. Beta particle
    c. Gamma particle
    d. None of the above

15. Zinc sulphate can be assayed by _____ titration
    a. Redox
    b. Complexometric
    c. Iodine
    d. Acid-base

16. Shoulder of cylinder color of Nitrogen is _____
    a. Blue
    b. Black
    c. Grey
    d. White

17. Chemical formula of Borax is
    a. Na2B4O7.10H2O
    b. Na2B4O7.12H2O
    c. Na2B4O7.14H2O
    d. Na2B4O7.16H2O

18. _____ assayed by Volhard method.
    a. Hydrogen Peroxide
    b. Sliver Nitrate
    c. Potassium hydroxide
    d. Sodium Chloride

19. A co-ordination compound is formed between metal and
    a. Another Metal
    b. Ligand
    c. Salt
    d. None of the above

20. 1 curie (Ci) is equal to
    a. 3.7×10^6 Bq
    b. 3.7×10^8 Bq
    c. 3.7×10^{10} Bq
    d. 3.7×10^{12} Bq

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SECTION "B"
[5 Q. × 3 = 15 marks]

Attempt *ANY FIVE* questions.

1. Classify antidotes with example.

2. Give the identification test for carbonate ion and magnesium ion.

3. WHO standard formula for ORS.

4. Give the reaction between
   a. Ferric ion and thioglycolic acid.
   b. Silver nitrate with ammonium thiocyanate

5. Write any three physiological roles of sodium and potassium ion.

6. Define protectives. Write briefly about titanium dioxide.

7. Write short note on
   a. Pharmacopeial monograph
   b. Official compound of iron

SECTION "C"
[5 Q. × 5 = 25 marks]

Attempt *ANY FIVE* questions.

8. Write down properties, preparation, uses and storage of nitrous oxide gas.

9. Briefly discuss the composition of glass and classify pharmaceutical glasses.

10. What are expectorant? How they work. Write the preparation and uses of ammonium potassium tartrate.

11. Write the general properties, preparation, uses, identification and on heating of boric acid.

12. What is the mechanism of actions of antimicrobials? Illustrate the preparation, properties and uses of hydrogen peroxide.

13. Define pharmaceutical aids. Write in brief about different type of water for pharmaceutical use.

14. Define limit test. Give the principle and method A for limit test of heavy metals

P.T.O.

SECTION "D"

[2 Q. × 7.5 = 15 marks]

Attempt *ANY TWO* questions.

15. Define radiopharmaceuticals. Discuss in detail about the pharmaceutical application, storage conditions and precautions during handling of radiopharmaceuticals.

16. Define impurities. Discuss the different sources of impurities in pharmaceutical substances?

17. Define antacids. Why antacid products are formulated in combination. Write the properties, preparation, identification, assay and uses of magnesium carbonate.