

Council for Technical Education and Vocational Training
Office of the Controller of Examinations
Sanothimi, Bhaktapur

Regular Exam - 2080 Mangsir/Poush (Scholarship)

Program: Diploma in Pharmacy

Full Marks: 80

Year/Part: Second (2021)

Pass Marks: 32

Subject: Pharmaceutical Chemistry I

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Group 'A' (Long Question)

Attempt any **THREE** questions.

[3×8=24]

1. Define acid and base according to Bronsted-Lowry concept. Write preparation, physico-chemical properties and uses of sodium hydroxide.
2. Define and classify antacids. Write preparations, physico-chemical properties and uses of calcium carbonate.
3. Define antiseptic, disinfectants, acidifying agents and protectives. Write preparations, physico-chemical properties and uses of hydrogen peroxide.
4. Define limit test. Write the principle and procedures for limit test of iron.
5. Write identification test of any four cations and any four anions.

Group 'B' (Short Question)

Attempt any **EIGHT** questions.

[8×4=32]

6. Write preparations, physico-chemical properties and uses of sodium phosphate.
7. Write preparations, physico-chemical properties and uses of magnesium sulphate.
8. What is astringent? Write preparation, physico-chemical properties and uses of zinc sulphate.
9. Write preparation, physico-chemical properties and uses of sodium fluoride.
10. What is hematinics? Write chemical properties and uses of ferrous fumarate.
11. Define radiopharmaceuticals. Write principle of GM counter.

Cont.

12. What is melting point? Write procedures for determination of melting point.
13. Define and classify ~~filtration~~ *ultrafiltration*.
14. What is column chromatography? Explain mobile phase and stationary phase used in column chromatography.
15. During acid-base filtration, 0.5 M NaOH will neutralize 40 ml of 0.25 M HCl. Calculate the volume of NaOH consume.

Group 'C' (Very Short Question)

Attempt any TWELVE questions.

[12×2=24]

16. Write uses of sodium benzoate.
17. What is protectives? Write uses of light kaolin.
18. Write preparations and uses of zinc oxide.
19. Write the uses of strontium chloride.
20. What is antidote? Write uses of activated charcoal.
21. What is ~~ORS~~ *ORS*? Write composition of ORS.
22. Write physiological functions of potassium and bicarbonate.
23. Define cations and anions with examples.
24. Define acidimetry and alkalimetry.
25. Define buffer with examples.
26. What is HPLC?
27. How many gram of Na_2CO_3 are required to prepare a liter of decinormal standard solution?
28. Define end point and equivalence point.
29. Define accuracy and precision.

Good Luck!