

MSc Sem.-1 Examination

402

Pharma Science

February-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q1A	Write a note on significance of quantitative analysis in quality control.	7 Marks
Q1B	Explain Redox titration in detail.	7 Marks
OR		
Q1A	Explain different techniques of analysis.	7 Marks
Q1B	Explain acid-base titration in detail.	7 Marks
OR		
Q2A	Write a brief note on Indicator electrodes used in potentiometry.	7 Marks
Q2B	What are the applications of conductometric analysis?	7 Marks
OR		
Q2A	Explain the estimation of Magnesium as Magnesium pyrophosphate using gravimetric analysis.	7 Marks
Q2B	Give derivation of Nernst Equation.	7 Marks
OR		
Q3A	Explain the concept of heat and mass transfer in detail.	7 Marks
Q3B	Write a brief note on Fluidized bed bioreactor and Packed bed bioreactor.	7 Marks
OR		
Q3A	Explain different types of bioreactor processes.	7 Marks
Q3B	Write a note on bioremediation.	7 Marks
OR		
Q4A	Explain microbial growth kinetics.	7 Marks
Q4B	Explain Solid state fermentation in detail.	7 Marks
OR		
Q4A	Explain the solid-liquid separation step in product recovery.	7 Marks
Q4B	Explain the recent developments in upstream processing.	7 Marks
Q5	Answer the following questions (Any Seven)	14 Marks
I	What are aprotic solvents? Give Examples.	2 Marks
II	What are the indicators used in redox titration?	2 Marks
III	What is the principle of fajan's method?	2 Marks
IV	What are the factors affecting electrode potential.	2 Marks
V	What is the diffusion current?	2 Marks
VI	Write the ilkovic equation.	2 Marks
VII	What are the two types of disposable bioreactors?	2 Marks
VII	What is the compost pile technique in bioremediation?	2 Marks
IX	Write down Fick's law.	2 Marks
X	Write down monond equation	2 Marks
XI	What are reverse micelles?	2 Marks
XII	What are collector substances? Give Examples.	2 Marks

BEST OF LUCK