

## BSC 3rd Year Chemistry Important Questions PDF

### Physical Chemistry

1. Explain the concept of Resonance Fluorescence.
2. Discuss Fluorescence, Phosphorescence, and Non-Radiative processes on the basis of the Jablonski diagram.
3. What is meant by an ideal and non-ideal solution?
4. Explain the phenomenon of osmosis and osmotic pressure.
5. What are the reasons for abnormal molecular masses of solute in a solution and what is the Van't Hoff factor?
6. Discuss the principles of Electrochemistry.
7. Explain Wave Mechanics in the context of Physical Chemistry.
8. Discuss the principles of Spectroscopy and Magnetic Resonance Spectra.
9. Explain the concept of Equilibrium Thermodynamics.
10. Discuss the Theories of Rate Process and Photochemistry.

### Organic Chemistry

11. Discuss the principles of Organic Chemistry IV.
12. Explain the concept of Molecular orbital and valence Bond Methods.
13. Discuss the principles of Nuclear Chemistry.
14. Explain the concept of Electronic Spectra of Transition Metal Complexes.
15. Discuss the principles of Hard and Soft Acids and Bases.

### Inorganic Chemistry

16. Discuss the principles of Inorganic Chemistry II and III.
17. Explain the concept of Metal Ligand Bonding in transition Metal Complexes.
18. Discuss the principles of Inorganic Polymers and Methods of Analysis.
19. Explain the concept of Novel Inorganic Solids.
20. Discuss the principles of Inorganic Materials of Industrial Importance.

### Applied and Industrial Chemistry

21. Discuss the principles of Chemical Biology and Biophysical Chemistry.
22. Explain the concept of Applications of Computers in Chemistry.
23. Discuss the principles of Analytical Methods in Chemistry.
24. Explain the concept of Industrial Chemistry.

### Green and Environmental Chemistry

25. Discuss the principles of Green Chemistry.
26. Explain the concept of Environmental Chemistry.
27. Discuss the principles of Water Management and Chemistry in Everyday Life.

### Specialized Chemistry Topics

28. Discuss the principles of Polymer Chemistry.
29. Explain the concept of Principles of Biochemistry.
30. Discuss the principles of General Chemistry.