### Unit I: Water:

### Unit II: Colloids, Viscosity, Surface Tension Osmosis, Diffusion and Donnan: Membrane Equilibrium:
Colloid Definition and Classification of Colloids, Properties of Colloids--Brownian movement, Tyndal effect, Dialysis, Ageing, coagulation, Electric properties. Biological significance of colloids. Definition and significance of: Viscosity, Surface tension, Osmosis, Diffusion and Donnan Membrane Equilibrium. 25%  

### Unit III: Separation and Purification Technique - I: Centrifuge technique:
Basic principle & application 
Factors affecting sedimentation. 
Desktop centrifuge 
Rotors: Vertical tube rotor, fixed angle rotor, Swinging bucket rotor. 
Electrophoresis:
Basic Principle, Factor affecting electrophoresis mobility 
Basic technique and application of electrophoresis 
Free electrophoresis & Zone Electrophoresis 
Type of supporting medium 
Electrophoresis apparatus (Power pack and electrophoresis unit in General) 
General technique of paper electrophoresis 25%  

### Unit IV: Environmental Biochemistry:
Sources biochemical effects and remedy of heavy metal on human body 
Lead, mercury, arsenic, cyanide 25%  

### Basic Text & Reference Books:
- Text book of Medical Biochemistry by Rana Shinde and Chattergy. (CH - 1)
- Outline of biochemistry Conn & Stump. (CH - 1)
- Biophysical Chemistry by Upadhyay, Upadhyay & Nath. (CH - 2)
- Environmental chemistry by B K Sharma. (CH - 4)
- Environmental chemistry by M M Chattergy. (CH - 4)