Unit -5 –ANALYTICAL TECHNIQUES AND ELECTRONIC MATERIALS

PART- A

5. Define UV-Visible spectroscopy and explain its principle of operation.
6. Describe the components of a UV-Visible spectrophotometer.
7. Discuss the applications of UV-Visible spectroscopy in analytical chemistry.
8. Explain the factors affecting the absorption spectrum in UV-Visible spectroscopy.
9. Discuss the advantages and limitations of UV-Visible spectroscopy.
10. Describe the procedure for obtaining a UV-Visible absorption spectrum.
11. Define Atomic Absorption Spectroscopy (AAA) and explain its principle.
12. Discuss the role of a hollow cathode lamp in AAA.
13. Explain the difference between atomic absorption and atomic emission spectroscopy.
14. Describe the process of atomization in AAA.
15. Discuss the advantages and limitations of AAA.
16. Explain the concept of background correction in AAA.
17. Describe the procedure for preparing a sample for AAA analysis.
18. Discuss the applications of AAA in environmental and clinical analysis.
19. Define Flame Photometry and explain its principle of operation.
20. Discuss the role of a flame in flame photometry.
21. Compare flame photometry with other analytical techniques for cation analysis.
22. Explain the significance of emission lines in flame photometry.
23. Describe the components of a flame photometer.
24. Discuss the factors affecting the sensitivity of flame photometry.
25. Explain the concept of interferences in flame photometry.
26. Discuss the advantages and limitations of flame photometry.
27. Discuss the applications of flame photometry in clinical and environmental analysis
28. Define Liquid Crystal Display (LCD).
29. Explain the working principle of an LCD
30. What is the role of polarizers in LCDs
31. What is response time in an LCD