1. Sequence - A.P, G.P, H.P
2. Bounded sequence – upper, lower
3. Supremum [Least upper bound] & Infimum [Greatest lower bound]
4. Limit of a sequence
5. Problems for finding limit for different sequences
6. Problems for finding limit for different sequences whose nth terms are given.
7. Convergent, divergent, oscillatory
8. To prove limit of convergent sequence is unique.
9. IF lt xn=l ; then lt |xn| = |l|
10. Every convergent sequence is bounded
11. If lt xn = l and l>0; then there exists a positive integer ‘m’ such that xn>0 for all n>m
12. If in a convergent sequence, finite no. of terms are removed; then convergence of sequence will not alter.
13. Problems on testing convergence of sequence
14. Problems Find the limit of the sequence, find limit whose nth terms are given.
15. Algebra of limits of sequence
    1. Addition
    2. Subtraction
    3. Multiplication
    4. Division
16. Cauchy’s principle of convergence
17. Monotonic Increasing & decreasing Sequence
18. Problems for verifying sequences are monotonicly increasing.
19. Problems to show that sequence is convergent.
20. Every monotonic increasing sequence which is bounded above is convergent.
21. Every monotonic decreasing sequence which is bounded below is convergent.
22. A monotonic increasing sequence which is not bounded above diverges to ‘+∞’
23. A monotonic increasing sequence which is not bounded above diverges to ‘+∞’
24. Recursive problems.
25. Infinite Series – Positive and alternate
26. Partial sum of series
27. Sequence of partial sum
28. Nature of series
29. Problems for Testing Convergence of series
30. A series of positive terms either converges or diverges to ‘+∞’.
31. If series un is convergent – then lim n->∞ un = 0.
32. Geometric series – 3 cases
33. Cauchy’s principle of convergence
34. Test for convergence -5 tests.
35. P series – 3 cases
36. De Almbert’s Ratio test – 3 cases
37. Raabe’s Test – proof
38. Nature of sequences – 4 proofs
39. Cauchy’s Root Test
40. Alternating Series – proof
41. Absolutely Convergent, Conditionally Convergent.
42. Every absolute convergent series is convergent.
43. Generalized D’Alembertz Ratio Test
44. Power Series
45. Radius of Convergences.
46. Theorem of Radius of Convergence
47. Point - Wise convergence.
48. Uniform Convergence.
49. Questions for testing in Uniform Convergence.
50. Cauchy’s principle of convergence for sequence of functions.
51. Mn Test
52. Test for uniform convergence.
53. Cauchy’s principle of convergence for series of functions.
54. A series of functions defined on [a, b] converges uniformly on [a, b]……………………….
55. A series of functions will converge uniformly and absolutely on [a,b] if there exists a convergent series of positive numbers………………
56. Abel’s Lemma Test
57. Abel’s test
58. Proof for Abel’s test.
59. Problems on Abel’s test
60. Dirichlet’s Test
61. Properties of Sequence & Series in Uniform Convergence