1. Explain the basic elements of Digital Signal Processing with the help of block diagram. Give the advantages and disadvantages of DSP.
2. Derive the DFT of the sample data sequence x(n)={1, 2, 3, 4} and compute the corresponding amplitude and phase spectrum.
3. Compute circular periodic convolutions of the two sequences x1(n)={2, 1, 2, 1} and x2 (n)={1, 2, 3, 4}using concentric circle method,DFT and IDFT method and matrix method.

4. Derive the Circular Convolution Property
5. Differentiate between Linear and Circular Convolution Method.
6. Difference between overlap and Save and overlap and add method.
7. Solve x(n)={2,3,6,-1,-1,0,8,4,5,-2,6,4,6,9} using overlap and save method and overlap and add method.
8. Differentiate between IIR and FIR filter

9. For the analog transfer function **H (s)=1/(s+1) (s+2)** determine H(z) using impulse invariant technique. Assume T = 1s.
10. Realise the discrete system y(n) = -0.1y(n-1)+0.2y(n-2)+3x(n) +3.6x(n-1)+0.6x(n-2) using.(a) Cascade forms (b) Parallel forms.