**Assignment 4**

**(Polynomials)**

1. Obtain the value of polynomial P(s) = s4+4s+2 at s=-2, s=4.5 & s=2+i4.
2. Find the roots of s4+3s3-15s2-2s+9=0.
3. Add and subtract the polynomials (6s3+4s2+5s+6) & (s2+2s+3).
4. Find the product of (s+3), (s+6) & (s+2). (Hint: two at a time)
5. Divide polynomial P by polynomial Q

P= s2+4s+4 Q= s+1

1. Roots of polynomial are -2, 4 & 6 find the corresponding polynomial.
2. Find the characteristic polynomial corresponding to following matrix



1. Fit the polynomial of degree 3 for the data given bellow

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X | 2 | 5 | 7 | 9 |
| y | 24 | 156 | 384 | 500 |

1. Obtain the derivative and integral of the following polynomial

P(s) = s4+4s3+10s2+20s+15 k=1

Where k is constant of integration.