Solve the following system using partial Gaussian elimination,

4.*0* +2 = 5 with maximal pivoting: *{* + *4y* +z = 3

+ 4z = -10

a) Establish the error bound for the approximation of *f(x*) = eil by Taylor polynomial of 8-th degree *(T8f)*(x) on the interval |2| < 1, with xo being the center of the interval.

b) Write the expression of Taylor polynomial (*T*8*f)*(x) from a).

Find the coefficients A*, B* and C of the following quadrature formula:

*f(x)d.* = A*f*'(0) + *Bf" (0*) + *Cf*(1) + *R(f)*

Solve the following using partial Gaussian elimination, with maximal pivoting:

2x1 + 4x2 – 2x3 = 2

4x1 + 9x2 – 3x3 = 8 1-281 – 3x2 + *7x*3 = 10

Find the polynomial interpolating the function *f*(x) = er at the nodes X0 = -1 double, x1 = ( double and x2 = 1 double.