Sample Questions

Subject: Quantitative Techniques   Course: S.Y.B.Sc.(I.T.)   Semester: 4

Q1. A civil engineer has measured the height of 20 building as 2950 cm while the true values are 2945 cm. Find the absolute and relative error.

1. 5, 0.0016977
2. 6, 0.1654322
3. 4,0.0053977
4. 3,0.0000459

Q2. A civil engineer has measured the height each beam as 35 cm while the true values are 30 cm respectively. Find the absolute error and relative error.

1. 4,0.000169999
2. 3,0.001677225
3. 6,0.016992503
4. 5,0.01666666

Q3. Find the Absolute error in the calculation of $z=5x^3+4x^2+x$ by taking approximate x as 6.28, where true value of x is 6.2768645.

1. 0.1292431
2. 0.53145813
3. 0.1544987
4. 0.4126075

Q4. . Find the relative error in the calculation of $z=3x^2+2x$ by taking approximate x as 3.45, where true value of x is 3.4568.

1. $3.612991081 \times 10^{-3}$
2. $2.612991081 \times 10^{-3}$
3. $3.139946522 \times 10^{-3}$
4. $3.000489157 \times 10^{-3}$

Q5. Find the approximate root of the equation $f(x)= x^2-3x+1$ by bisection method. Assume the accuracy of 0.01.

1. 9.457
2. 6.854
3. 2.625
4. 7.915