Q1 (ans) >> is computer use a finite number of bits(0’ s and 1;s) to represent numbers.

Q2 (ans)>> # round of error

# Truncation /Discretization of error

# Approximation error

# Relative error

# Absolute error

Q3 (ans) >> there are two measurement of error

1:- absolute error

2:- relative error

1. Absolute error is magnitude of the difference between the true value x and the approximate value Xa

The error between two values is defined as

Eabs = ||X-Xa||

Where X denotes the exact values and Xa denotes the approximation

2. Relative error is defined as the ratio of absolute to the size of X

Erel= ||X-Xa||/||X||

Q4 (ans) >> Modeling is the art of describing in symbolic language a real life

System so that approximately correct prediction can be made regarding the behavior

or evolution of the system under varied circumstances of interest.

\* Mathematics is the language of engineering

Q5 (ans) >> # Accuracy:-refers to how closely a value agree with true value.

# Precision:-refers to how closely a values agree with each other

Q6 (ans) >>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 35 | 2 |  |  |  |  |  |
| -34 | 17 | 2 |  |  |  |  |
| **1** | -16 | 8 | 2 |  |  |  |
|  | **1** | -8 | 4 | 2 |  |  |
|  |  | **0** | -4 | 2 | 2 |  |
|  |  |  | **0** | -2 | **1** |  |
|  |  |  |  | **0** |  |  |
| Translation of numbers from one system to another | | | | | |  |

Happened:3510 = 1000112   
  
The fractional part of number is found by multiplying on the basis new

|  |
| --- |
| Translation of numbers from one system to another |
| **0** | .625 |
| **.** | 2 |
| **1** | 25 |
|  | 2 |
| **0** | 5 |
|  | 2 |
| **1** | 0 |
|  |  |

Happened:0.62510 = 0.1012   
  
Add up together whole and fractional part here so:  
  
1000112 + 0.1012 = 100011.1012   
  
Result of converting:  
35.62510 = 100011.1012