**Mid Term Examination**

**Subject: Basic Lab Calculations**

**Fall-2020**

**Time Allowed: 03 Hours Marks: 30**

**Note: Please attempt all questions. All questions carry equal marks. Both handwritten and computer typed solutions are acceptable. In case of Handwritten solution, please write neatly and take clear pictures through CamScanner and make a pdf file to upload.**

**Q No. 1**

Describe the difference between positional and Non-positional number system. List down all types of positional number system and discuss any two with example.

**Q No. 2**

Solve the following equations

* **18 + 5(7 – 3)] + 64 ÷ [20 – (8 × 2)]**
* $4\frac{1}{10}$ **-** $\left[2\frac{1}{2}\right.$ **-** $\left\{\frac{5}{6}\right.$ **-** $\left(\frac{2}{5}\right.-\frac{3}{10}-\frac{4}{15} )\}]$
* **5−2−(8−12)16÷−8**

**Q No. 3**

Solve the following equations

* **2*x* - 3*y* =33; 2*x* + *y* =21**
* $\frac{4x-3}{5}- \frac{2x-3}{2}=-2$

**Q No. 4**

Solve the following exponential equations

* **3(a4 b3)10 x 5 (a2 b2)3**
* **(a3n-9)6  ÷(a2n-4 )**

**Q No. 5**

1. Name prefixes for the following
2. 0.000001
3. 1,000,000
4. 1,000,000,000
5. 0.000000001
6. 0.000000000001
7. Convert 98.6**0F** into kelvin scale.

**Good Luck**