

Ministry of Higher Education

Manzala Higher Institute for Engineering and Technology

Second semester :2023/2024.

Department: Electronic Eng.

Sheet (1)



Course title:  
Electronic measurements

Code: COM 123.

1) The actual mass of an apple is 0.175 kg. A student uses a balance scale to determine that the mass of the apple is 168 g. Find the absolute error.

2) The actual mass of an apple is 0.175 kg. A student uses a balance scale to determine that the mass of the apple is 168 g. Find the relative error.

3) The expected value of the voltage across a resistor is 50V; however, measured value of 49V. Calculate a) The absolute error b) The percent of error

3) A Wheatstone bridge is balanced with all the four resistances equal to 1 kW each. The bridge supply voltage is 100 V. The value of one of the resistance is changed to 1010 W. The output voltage is measured with a voltage measuring device of infinite resistance. The bridge sensitivity is

a) 2.5 mV/W

c) 25 mV/W

b) 10 V/W

d) none of the above

5) A pressure measurement instrument is calibrated between 10 bar and 260 bar. The scale span of the instrument is

a) 10 bar

b) 260 bar

c) 250 bar

d) 270 bar