

Max Marks: 20

01/09/2017

APL103 – EXPERIMENTAL METHODS
Minor 1

Student name: Aamna Afroz

Entry #: 2016TT10 898

Question 1 (5 Marks): Prove that the area under the normal (Probability) curve is unity.

Question 2 (5 Marks): "For many cases arithmetic mean is the best estimate of the true value"; prove this statement.

Question 3 (5 Marks): For 120 Ω strain gauge mounted over a rod in a quarter bridge condition what should be the output (in volts) for a given 5v excitation and boundary conditions as shown below.



$E=200$ GPa
 $P=2000$ N
Cross sectional area = 10 mm²

Question 4 (5 Marks): For the data given below provide the functional fit using a least square linear curve fitting.

X	0	0.5	1.0	1.5	2.0	2.5
Y	0	1.6	2.9	4.7	6.0	7.2

END

NOTE: If you think something is missing, please feel free to assume the data. But do not forget to clearly mention your assumption/s.