

BT2022 | QUIZ II | FEB-MAY 2021 | 20 Marks

Consider the dataset on the expression of genes X1, X2, X3, X4, X5 under Condition 1 and Condition 2.

Preliminary analysis on the distribution of these data points shows that they are drawn from normal populations.

Compute the t-statistic for these genes ( $5 \times 3 = 15$  Marks).

Find out the number of differentially expressing genes (out of 5) at FWER = 0.05 (2 Marks) and the highest / cut-off p-value that pass through the Bonferroni Method of controlling FWER (3 Marks).