M.Sc. NUCLEAR MEDICINE TECHNOLOGY
FIRST YEAR (From 2020-2021 onwards)
PAPER IV – MATHEMATICS & STATISTIC

Q.P. Code: 282303

Time: Three hours   **Answer ALL Questions**   **Maximum: 100 Marks**

I. Elaborate notes on: (2 x 20 = 40)

1. Explain the following: i) Euler's equation, ii) Fourier Transforms, iii) Modulation Transfer Function & iv) Laplace Transform.

2. Explain the Mean, Mode, Median and Standard Deviation with a suitable example.

II. Write Short Notes on: (10x6 = 60)

1. Explain the Mann-Whitney U test.
2. Explain the concept of correlation and regression.
3. Explain parametric functions.
4. Methods of the least square fitting.
5. State the power rule of differentiation with an example.
6. Rules of differentiation.
7. Complex numbers.
8. Students-t-test.
9. Analysis of variance.
10. Specificity, sensitivity and accuracy.

*****