



Assignment

M.Sc. Zoology
Semester-II

Title of Assignment:

PROBABILITY
DISTRIBUTION:- Part Ist

Student Name:

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Roll Number:

01.

Part I

NORMAL DISTRIBUTION:-

→ It is a Continuous PD i.e., random variable can take on any value within a given range.
Ex - Height, weight, marks etc.

→ Developed by Eighteenth Century mathematician, astronomer Karl Gauss so, also called Gaussian Distribution.

→ It is Symmetrical Unimodal.

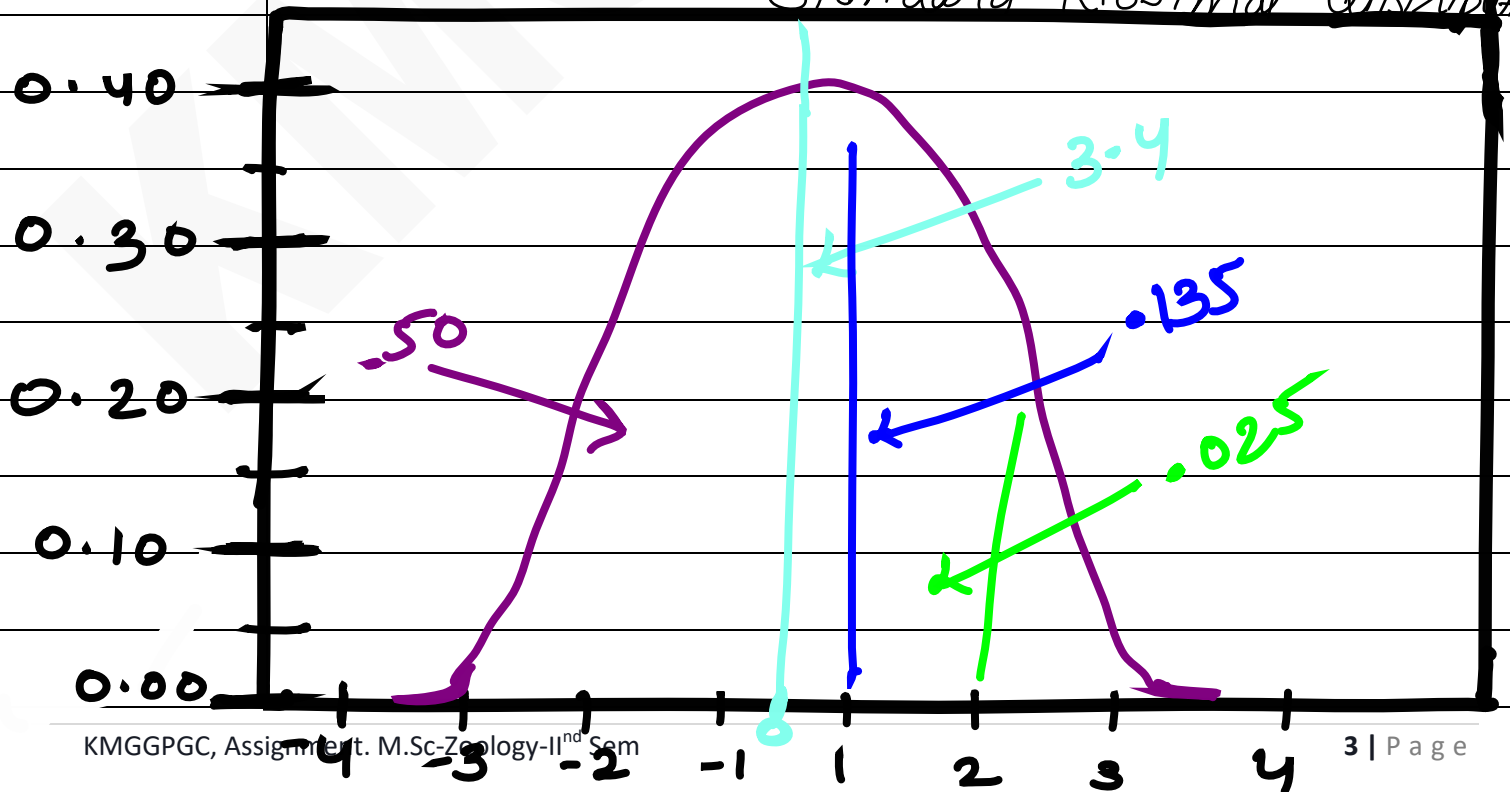
⇒ Mean = μ so, SD = σ

* DEFINING A NORMAL DISTRIBUTION:-

→ Only two parameters are considered: Mean & Standard deviation

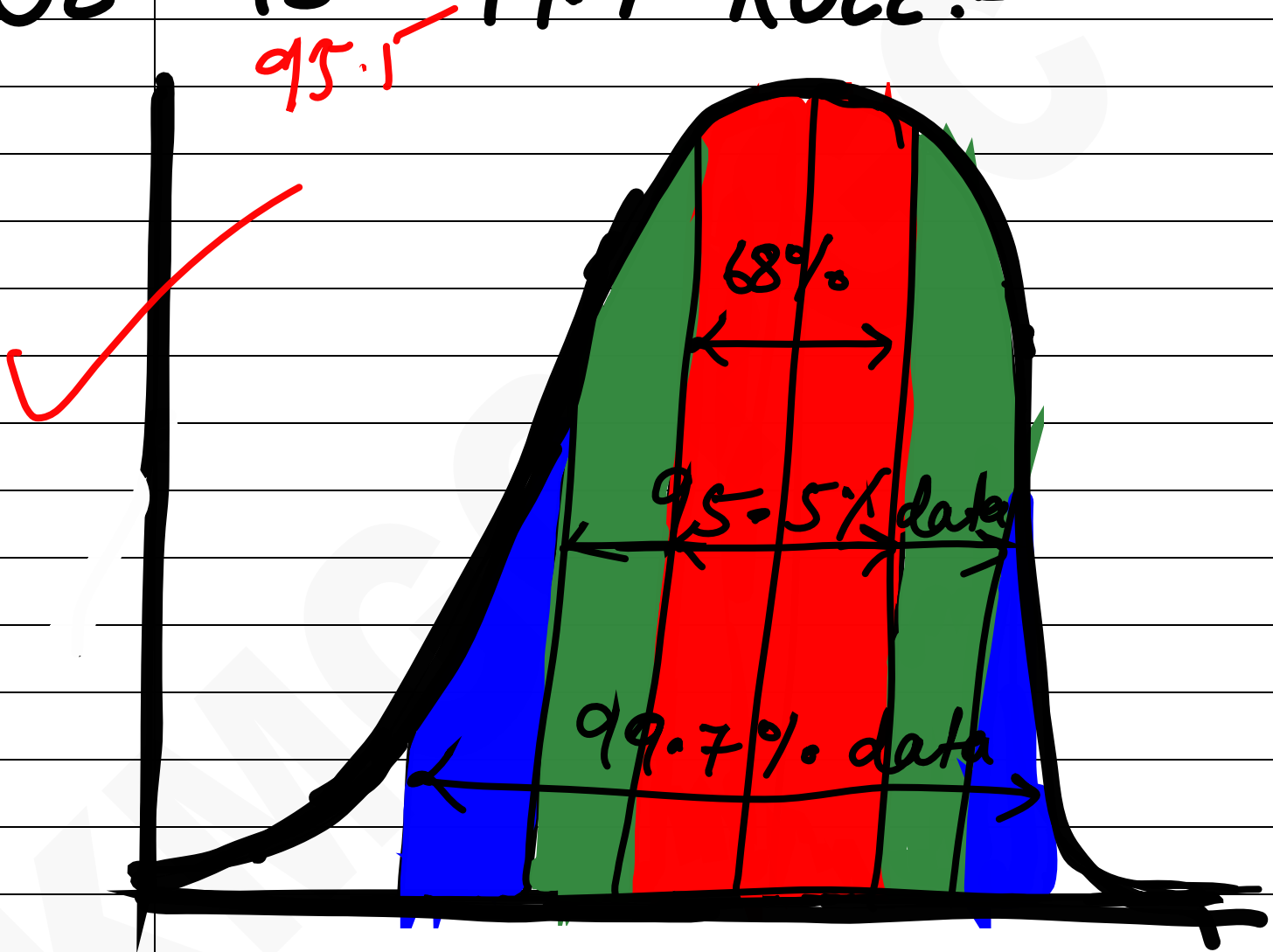
- Same mean, Different Standard deviation.
- Same SD, Different Mean
- Different Mean & Different S.D.

AREA UNDER THE NORMAL CURVE:



Standard Score (Z)

68-95-99.7 Rule:-



* AREA UNDER THE CURVE :-

- The mean ± 1 standard deviation covers approx. 58% of the area under the curve.
- The mean ± 2 standard deviation covers approx. 95.5% of the area under the curve.
- The mean ± 3 standard deviation covers 99.7% of the area under the curve.

* STANDARD NORMAL

PROBABILITY

DISTRIBUTION

→ In Standard Normal PD
mean = 0 , SD = 1

$$\Rightarrow Z = \frac{x - \mu}{\sigma}$$

• Z = no. of standard deviation
from x . to mean.

Also called Z score

• x = value of R.V.





