

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

FIRST YEAR

B.A./B.SC. FIRST SEMESTER (July – December), 2011

Mid-Semester Examination, September, 2011

Date : 14/09/2011

STATISTICS (General)

Time : 11 am – 12 noon

Paper : I

Full Marks : 25

Answer any five taking at least two from each group.

[5×5 = 25]

Group – A

(Probability)

1. Find the number of words that can be obtained by arranging any four letters from the word MESSI.
2. Five Letters are randomly put into five envelopes with addresses of the letters. Find the probability that no letter reaches its correct destination.
3. Show that if A and B are two independent events, A^C and B^C are also independent and disjoint.
4. Box I contains 3 white and 4 black balls. Box II contains 4 white and 3 black balls. A ball is taken from box I and put into box II. Next, a ball is taken from box II. Find the probability that it is a white ball.

Group – B

(Descriptive Statistics)

5. Write a short note on Bar Diagram.
6. With suitable examples distinguish between :
 - a) Class Limits and Class boundaries
 - b) Frequency Density and Relative frequency.
7. If there are 3 groups with n_1 , n_2 and n_3 number of observations in each group and \bar{x}_1 , \bar{x}_2 and \bar{x}_3 their respective arithmetic means, find out the arithmetic mean of the combined group.
8. Show that the combined median of two groups lies between the median of the two groups.