



AAA-1824 Seat No. _____

B. Sc. (Sem. IV) Examination

March / April - 2018

ES - MAT - 22 : Business Mathematics - 2

Time : 2 Hours]

[Total Marks : 50

Instructions :

There are two question and figure to the right indicate marks of the corresponding question.

1 Answer any three : 30

- (a) Twenty books are placed at random in a shelf. Find the probability that a particular pair of books shall be :
- (i) Always together
 - (ii) Never together.
- (b) The first twelve letters of the English alphabet are written at random. What is the probability that :
- (i) there are 4 letters between A and B.
 - (ii) A and B are written down side by side.
- (c) A and B stand in a ring with 10 other persons. If the arrangement of the persons is at random; then find the probability of
- (i) there are exactly three persons between A and B.
 - (ii) A and B stand together.

- (d) A five figure number is formed by the digits 0, 1, 2, 3, 4 (without repetition). Find the probability that the number formed is divisible by 4.

2. Attempt any two :

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- (1) Consider a simple trial of tossing a coin six times. Then find the probability of getting

(i) exactly three heads

(ii) not more than two heads.

(Note : By binomial distribution)

- (2) The number of mistakes counted in one hundred typed pages of a typist revealed that he made 2.8 mistakes on an average per page. Find probability, that in a page typed by him.

(i) there is no mistake

(ii) there are two or less mistakes.

(Note : By Poisson distribution)

- (3) Write down the properties of Normal distribution.