

**Goa Vidyaprasarak Mandal's
Gopal Govind Poy Raiturcar College of Commerce and Economics
Ponda Goa**

**BCA SEMESTER IV, ISA-III March 2020
DATA ANALYSIS AND STATISTICAL TECHNIQUES**

Marks: 15

Duration: 45 minutes

Q) Answer ANY3 of the following questions. (5x3=15)

1. A problem is statistic is given to three students A, B & c whose chances of solving it are $\frac{1}{2}$, $\frac{1}{3}$ & $\frac{1}{4}$ resp. What is the probability that the problems will be solved?
2. Let A & B be two events with $P(A) = \frac{1}{3}$, $P(B) = \frac{1}{4}$, $P(A \cap B) = \frac{1}{2}$. Find $P(A/B)$ & $P(B/A)$.
3. A manufacturing unit manufactures scooters. It has been observed that there are 2 defective pieces per unit of product inspected. Using poisson distribution, calculate the probability of finding
 - a) No defective item
 - b) At least one defective scooter.(Given $e^{-2} = 0.1353$, $e^{-0.2} = 0.8187$)
4. A survey of 36 students yields a mean age at the time they graduate from college as 21 years with a standard deviation of 2.4 years. Find the 95% confidence interval for the population mean.
5. Business today is conducting a survey between Panaji & Margao on the hourly wages of labourers the result of the survey is as follows.

City	Mean hourly wages	Std deviation	sample
Panaji	Rs. 8.95	Rs. 0.40	200
Margao	Rs. 9.10	Rs. 0.60	175

Business today wants to test the hypothesis of the 0.05 significance level that there is no difference between the hourly wages of the labourers in the cities.