Sohag University

Faculty of Pharmacy

1th Year Exam Jan., 2016

Title: Statistics

Date: 21.01.2016

Time allowed: 2 hours

Faculty of Science
Mathematics Department

Answer the following questions:

1. (a): If $P(A \cup B) = 0.7$, $P(A) = 0.3$ **and** $P(B) = 0.5$. [15marks]

Find P(A∩B) , P(A | B) , P(A-B) , $P(A \cap B^c)$ **and** $P(B^c)$.

(b): For the following frequency distribution. [15 marks]

Wages (Rs.)	10-	20-	30-	40-	50-	60-	70-80
No. of employees	8	10	16	14	10	5	2

Find : The arithmetic mean

2. (a): It was found that the mean length of 100 parts produced by a lathe [10 marks]

was 20.05 mm with a standard deviation of 0.02 mm. Find the probability that a part selected at random would have a length

(1) between 20.03 mm and 20.08 mm **(2) less than 20.01 mm**

(3) greater than 20.09 mm.

$\Phi(1) = 0.3413$, $\Phi(1.5) = 0.4332$, $\Phi(2) = 0.4772$

[15 marks]

(b): For the following data of,

150, 176, 105, 133, 140, 305, 215, 207, 210, 173, 150, 78, 96

Find: the mean, the mean deviation, the median and the mode

3. (a): Define the standard deviation [5 marks]

(b): For the following data: [20 marks]

Age of lamps	500 -	600 -	700 -	800 -	900 -	1000 -	1100 - 1200
No. of lamps	120	125	315	210	110	90	50

1- Calculate the standard deviation

2- Draw the histogram of this data.

With our best wishes

Dr. Nasser A. Abou-Elheggag