

ASSIGNMENT # 01

SPRING-2020

Program: MBA (I)

Course Title: Quantitative Techniques for Managers

Dated: 30th June,2020

Instructor: Raza Ahmed Khan

Total Marks: 50

Important Instructions:

- Assignment should be submitted within 6 – Hours.
- Submitted Document's format should be in word, pdf or in jpg.
- No Assignment will be accepted after due date mentioned above.
- Each question carries 12.5 marks.
- Attempt All Questions

Question No: 01

Students at multiple grade schools were asked what their personal goal (get good grades, be popular, be good at sports) was and how important having money were to them (1 very important and 4 least important). Do the data provide enough evidence to show that goal attainment and importance of money are independent in following given table? Test at the 5% level.

Table : Personal Goal and Importance of Money

Goal	Money Importance Rating				Row Total
	1	2	3	4	
Grades	14	34	71	128	247
Popular	14	29	35	63	141
Sports	6	12	26	46	90
Column Total	34	75	132	237	478

Question No: 02

- a) Write down the basic assumptions of Binomial Distribution.
- b) If X is binomially distributed with 8 trails and probability of success equal to $\frac{3}{4}$ at each attempt, what is the probability of:
- Exactly 5 successes
 - At least one success

Question No: 03

- a. Differentiate between Z-test, t-test & ANOVA test
- b. Write down the basic assumptions for Chi-square test.

Question No: 04

The p.d.f of the age of babies, x years, being brought to a post-natal clinic is given by

$$f(x) = \begin{cases} \frac{3}{4}x(3-x) & 0 < x < 2 \\ 0 & \text{otherwise} \end{cases}$$

If 45 babies are brought in on a particular day, how many are expected to be under 8 months old?
