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SVKM'S NMIMS

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Programme: M. Pharm + MBA (Pharmaceutics/PQA/PT/IP) **Year:** II **Semester:** III
Academic Year: 2019-20 **Marks:** 50
Subject: Statistics for Management with MS Excel **Time:** 2.00 pm to 4.00 pm
Duration: 2 hrs.
Date: 29 November 2019 **No. of Pages :** 02

FINAL EXAMINATION

INSTRUCTIONS:

Q1 is compulsory. Attempt any 3 from the remaining.
Please write the Question number and subsections number without fail.

Q1. MediPharma has recorded the sales achievement percentage (%) of their territories as per the slabs as given below . Find out a. Mean b. Median c. Mode and d. Standard deviation on the of target achievement

0- 10	1
10- 20	3
20- 30	6
30- 40	10
40- 50	12
50- 60	11
60- 70	6
70- 80	3
80- 90	2
90-100	1

Q2 A&B. A consulting firm is bidding for two jobs, one with each of two large multinational corporations. The company executives estimate that the probability of obtaining the consulting job with firm A, event A, is 0.45. The executives also feel that if the company should get the job with firm A, then there is a 0.90 probability that firm B will also give the company the consulting job. What are the company's chances of getting both jobs?

Q3. A. What is sign test.

B. Find the preference pattern against two brands through sign test

Suppose we have the following table indicating the ratings assigned to two brands of health drink X and Y by 12 consumers. Each respondent was asked to taste the two brands of health drink and then rate them.

Ratings of brands X and Y health drinks

Brand X	26	30	44	23	18	50	34	16	25	49	37	20
Brand Y	22	27	39	7	11	56	30	14	18	51	33	16
Sign		+	+	+	+	-	+	+	+	-	+	+

Third row shows + and – signs. When X's rating is higher than that of Y, then the third row shows the '+' sign. As against this, when X's rating is lower than that of Y, then it shows the '-' sign.

We have to apply the two-sample sign test assuming null hypothesis (H_o) as both brands enjoy equal preference.

Q4Suppose that a company conducts a survey of 1,000 doctors to determine the average number of hospitals they attached . The data show a large number of doctors with two or three hospitals and a smaller number with one or four. Every doctors in the sample has at least one hospital and no doctor has more than four. Find out the weighted average of number of hospitals attached per doctor.

No. of hospitals attached	1	2	3	4
No. of Drs	73	378	459	90

Q5. In response to a medical camp, there is a footfall of people lined up for a free health checkup walked in both sex randomly. However,

M W M W M MM W M W M MM W W M

M MM WW M W M MM W M MM W W

W M W M MM W M W M MMM W W M

Test for randomness at the $\alpha = .05$ significance level. As always, we first state our hypotheses: H0 : Arrangement is random. H1 : Arrangement is not random based on Run test.

Z value at 0.05 falls between -1.96 to 1.96