[2 Q A2]

SARDAR PATEL UNIVERSITY
BBA (Gen.) (IIISem.) Examination
Thursday, 8th December-2016
02.00 pm - 04.00 pm
UM03CBBA06 – Statistics for Management-I

Total Marks: 60

Note: (i) Figures to the right indicate marks
(ii) Graph paper will be provided on request.

Q.1 A. Write types of data. State sources of data and write about any two of the sources in detail. **[08]**

B. From the prices X and Y of shares A & B resp. given below. State Which share is more stable in value. **[07]**

X	55	54	52	53	56	58	52	50	51	49
Y	108	107	105	105	106	107	104	103	104	101

OR

Q.1 A. Find Mean, Median, Mode and Quartile deviation for the following distribution. **[08]**

Class	4-8	8-12	12-16	16-20	20-24	24-28	28-32	32-36	36-40
f	5	8	18	25	15	12	10	5	2

B. From the following data find missing frequency if mean = 33. **[07]**

Class	0-10	10-20	20-30	30-40	40-50	50-60
f	10	15	30	?	25	20

Q.2 A. State and prove the law of addition of probability for two events. **[07]**

B. Two cards are drawn at random from a pack of 52 cards. Find the probabilities that, **[08]**
(1) Both are spade
(2) One is queen and other is king
(3) Both are of the same suit
(4) Both are diamond.

OR

Q.2 A. Expalin the terms: random experiment, mutually exclusive events, random experiment, Independent events. **[07]**

B. If P(A) = 0.40, P(B) = 0.55 and P(A∩B) = 0.15 then find (i) $P(\bar{A} \cap \bar{B})$ and (ii) P(A/B). **[08]**

Q.3 A. In a normal distribution 60% observations are more than 60 and 6% observations are less than 6 then find the mean and variance of the distribution. **[08]**

B. Give conditions, p.d.f., properties and uses of probability distributions that you have studied. **[07]**

Q.3 A. Give $Q1 = 20$ and $Q3 = 40$ for a normal distribution. Find its mean and variance. **[08]**

B. For a Poisson variate if $3P(x = 2) = P(x = 4)$ then find mean, variance and standard deviation. **[07]**

Q.4 A. Draw $\bar{X}$ and R charts for the following data and state your conclusions: **[08]**

Sample no.	1	2	3	4	5	6	7	8	9	10
$\bar{X}$	12.8	13.1	13.5	12.9	13.2	14.1	12.1	15.5	13.9	14.2
R	2.1	3.1	3.9	2.1	1.9	3.0	2.5	2.8	2.5	2.0

(For n=5, A_2=0.577, D_3=0, D_4=2.115)

B. Write the uses of C- chart and draw C- chart. If the number of defects noticed in 20 cloth pieces **[07]** are 1, 4, 3, 2, 5, 4, 6, 7, 2, 3, 2, 5, 7, 6, 4, 5, 2, 1, 3, 8. Also draw your conclusion.

OR

Q.4 A. Give the difference between: **[08]**
(1) p- chart and np- chart
(2) charts for attributes and charts for variable.

B. Write the control limits of p – chart and np – chart. Also draw np – chart and state your **[07]** conclusions for the samples. Each of 250 radios, inspected for 12 days as given below:

Sample	1	2	3	4	5	6	7	8	9	10	11	12
No. of defective items	25	47	23	30	24	34	39	32	35	22	45	40

— X — X —