

Sent No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF COMMERCE
B.Com - Mid Term Examination - April '17

Semester : II
Subject Code : 16100156
Subject Name: BUSINESS STATISTICS-I

Date: 18/04/2017
Time: 10.30 to 12.30
Total Marks: 40

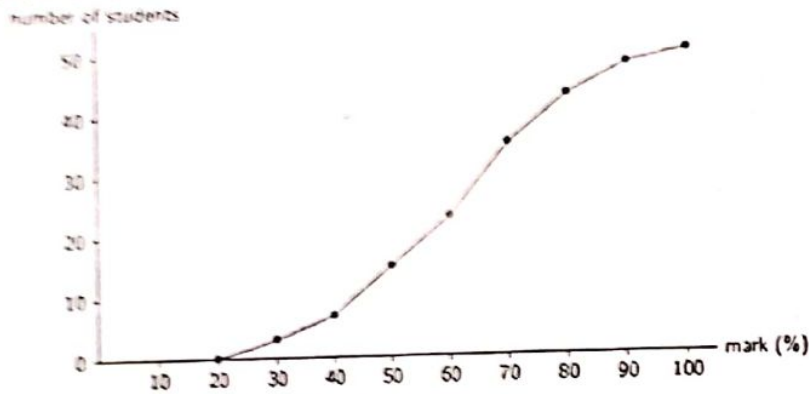
Instructions:

1. Attempt all questions from each section.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.

(08)

Q.1. Answer the following.

1. What is the midpoint of the class 100.5 – 110.5 ?
2. What is the range of the weights for the following weights (in gm) of 30 oranges?
31, 41, 46, 33, 44, 51, 56, 63, 71, 71, 62, 63, 54, 53, 51, 43, 36, 38, 54, 56, 66, 71, 74,
75, 46, 47, 59, 60, 61, 63.



3. The picture given above is an example of _____.
(a) histogram (b) bar graph (c) ogive (d) frequency polygon
4. The arithmetic mean of 6, 8, $x + 2$, 10, $2x - 1$, and 2 is 9. Find the value of x .
5. What is the Geometric Mean of 2 and 18?
6. What is the mean and s.d. of binomial distribution?
7. If $P(A) = \frac{1}{3}$, $P(B') = \frac{1}{4}$ and $P(A \cap B) = \frac{1}{6}$ then $P(A \cup B) =$ _____.
8. If two events A, B are mutually exclusive events then $P(A \cup B) =$ _____.

(04)

Q.2.A Find the variance and the standard deviation for the following data.

x	6	7	8	9	10	11	12
f	3	6	9	13	8	5	4

- B The manager of Hudson Auto Repair would like to get a better picture of the distribution of costs for new parts used in the engine tune-up jobs done in the garage. A sample of 50 customer invoices for tune-ups has been taken and the costs of parts, rounded to the nearest rupees, are listed below. (04)

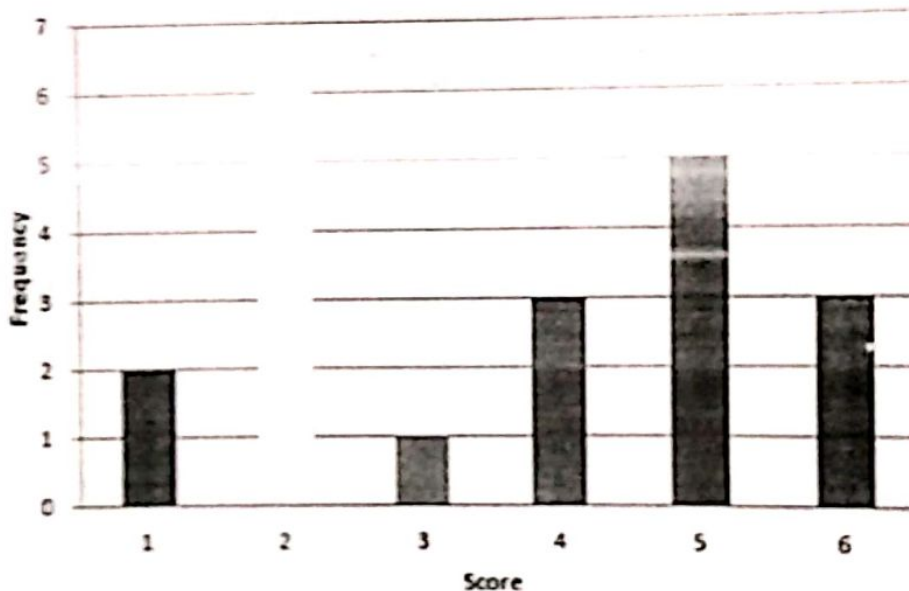
91 78 93 57 75 52 99 80 73 62
 71 69 72 89 66 75 79 75 72 76
 104 74 62 68 97 105 77 65 80 109
 85 97 88 68 83 68 71 69 67 74
 62 82 98 101 79 105 79 69 62 73

Develop a grouped frequency distribution for these cost data containing the classes of length 10.

Also develop cumulative frequency, relative frequencies and percentage frequency.

- Q.3.A An unbiased coin is tossed for 6 times. Find the probabilities of getting (04)
 (i) 5 heads (ii) at the most 2 heads
 B The following bar graph shows the results when a die was thrown a number of (04)
 times.

Scores on a die



- (i) How many 6 were thrown?
 (ii) How many times 2 were obtained?
 (iii) In total how many times the die was thrown?
 (iv) Which number was obtained the least times?

Q.4 Attempt any 2 out of 3

- A. Find the mean deviation from median of the following: (08)

Income	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50
No. of workers	10	25	30	20	15

- B. A class carried out an experiment to measure the lengths of cuckoo eggs. The length of each egg was measured to the nearest mm. The results are shown in the following histogram: