N.B. : 1. Attempt all questions.

    2. Attempt any <u>two subquestions</u> from b part out three.

    3. Figures to the right indicate marks.

    4. Log tables and graph papers will be supplied on request.

Q.1 a. Define a variate.   **(1)**

        OR

  a. Define an attribute.   **(1)**

  b. 1. The following data give the record of daily wages of 30 workers in a   **(7)**
factory.

127, 129, 131, 132, 122, 124, 112, 114,
137, 114, 126, 129, 124, 126, 134, 128,
121, 129, 135, 118, 132, 127, 119, 133,
131, 125, 134, 117, 116, 131

Prepare a frequency distribution, taking the class internal as 110 - 114,
115 - 119 .... etc. What is variate? What is length of the class interval?
Prepare cumulative frequency less than type.

    2. Explain rule's coefficient of Association. Interpret the value   **(7)**
$Q = +1, -1, 0$.

    3. Tabulate the following data.   **(7)**
The number of students in a college in the year 2001 was 510 of which
480 were boys and the rest girls. In 2004, the number of boys increased
by 100% and that of girls by 300% as compared to their strength in
2001. In 2007, the total number of students in the college was 1200,
the number of boys being double the number of girls.

Q.2 a. **Fill in the blank.**

    1. Mode can be located the graphically by ....   **(1)**

        OR

    1. Median can be located graphically by ....   **(1)**

  b. 1. State with an example bar diagrams.   **(7)**

    2. For the following data draw Histogram and cumulative frequency   **(7)**
curve less than type and estimate Q_1 and Q_3.

Class Interval	0 - 5	5 - 10	10 -15	15 - 20	15 - 20	20 - 25	25 - 30
Frequency	4	8	12	17	17	7	2

    3. Draw a suitable diagram to represent the following data relating to   **(7)**
the imports of five raw metals in 2007 by a small industry.

(P.T.O.)

Raw Metal	Imports (in billion ₹.)
Aluminium	36
Copper	28
Iron	45
Zinc	28
Silver	35

Q.3 Complete the sentence.

a. The sum of the deviations of x from their mean $\bar{x}$ is .... (1)

OR

a. The median for the following set of values 10, 14, 7, 9, 4, 16 (1)
is ....

b. 1. The average weight of group of 25 boys was found to be 78.4 pounds. (7)
It was later discharged that one weight was misread as 63 pounds
instead of 96 pounds. Calculate the correct average. Also calculate
the average leaving out the wrong value.

2. **Define the following:** (7)
1. Geometric mean   2.   Combined mean
3. Harmonic mean

3. Compare mean, median and mode. (7)

Q.4 a. What is primary data? (1)

OR

a. What is secondary data? (1)

b. 1. Give a rough sketch of the 3 way table for attributes A, B, C. (7)
A - boys   B - successful   C - wearing glasses

2. Draw a pie diagram to represent the following data showing the (7)
units of electricity to different classes of consumers during a month
by an electric supply company.

Consumer Class	Percentage of units sold
Motive power	56
Light and Fans	29
Domestic Supply	13
Street Lighting	2

3. The median value of marks (out of 120) obtained by 65 students is (7)
53. it is later discovered 38 marks instead 83 marks whereas marks
of another student were recorded as 74 which he had actually scored
47. What would be the correct median? Give reason.