COURSE CODE (CREDITS): 18B11MA312 (4)   MAX. MARKS: 15

COURSE NAME: PROBABILITY AND STATISTICAL TECHNIQUES

COURSE INSTRUCTORS: MDS   MAX. TIME: 1 Hour

Note: (a)All questions are compulsory.
(b)Marks are indicated against each question in square brackets.
(c) The candidate is allowed to make suitable numeric assumptions wherever required for solving problems
(d) Scientific Calculator is allowed.

Q-1 The pie graph shows the distribution of 9000 employees working in five departments A, B, C, D and E of a company. If the number of employees working in department A is x and the total number of employees working in departments C and E is y, then find the value of $y-2x$.
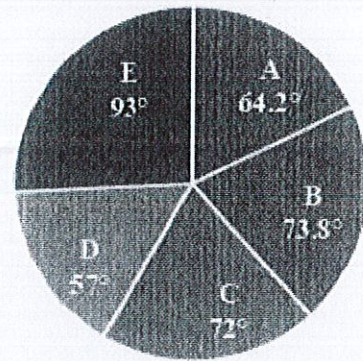
In Pie graph, given that
$(A(64.2^0), B(73.8^0), C(72^0), D(57^0), E(93^0))$

CO-1 [3]

Q-2 For the data given below, find the missing frequency if the arithmetic mean is 33, and hence find the median of the series.   CO-1 [4]

Loss per shop (Rs.)	0 – 10	10– 20	20 – 30	30 – 40	40 – 50	50 – 60
No. of shops	10	15	30	---	25	20

Q-3 Consider the following frequency distribution data relating to the wages of employees of a company: CO-1 [3]

Wages (Rs.)	30 – 40	40– 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100
No. Of persons	1	3	11	21	43	32	9

Calculate **(a)** upper quartile **(b)** 7th decile **(c)** 60th percentile.

Q4. Calculate the Karl Pearson's coefficient of skewness for the following data: CO-1 [5]

Wages (Rs.)	0 – 10	10– 20	20 – 30	30 – 40	40 – 50
No. of workers	15	20	30	25	10