

Due date for this assignment: 2021-06-03, 23:00 IST.

You may submit any number of times before the due date. The final submission will be considered for grading.

SMQ1

If the The mean annual salary paid to all employees in a company is INR 43,000. The mean annual salaries paid to male and female employees of the company are INR 45,000 and INR 35,000 respectively. Then, the percentage of males employed by the company is:

1 point

SMQ2

The placement statistics for the year 2020 of an engineering college that grants degrees in Computer Engineering is given in Table MockQ1.1.

Roll No	Gender	Score Percentage	Backlogs	Salary in lakhs
CS16B000	F	10	0	22
CS16B001	M	12	0	28
CS16B002	M	12	1	8
CS16B003	M	18	1	30
CS16B004	M	14	1	24

MockQ1.1 Placement dataset

What is the sample standard deviation of the Salary in lakhs of students given in Table MockQ1.1? Enter the answer correct to two decimals accuracy.

1 point

SMQ3

The stem and leaf plot diagrams given in Figure MockQ1.2 and Figure MockQ1.3 show the results of Statistics and Mathematics exams conducted in a school respectively. In Figure MockQ1.3, 'a' is an unknown value.

Stem	Leaf
1	7
2	2
3	
4	8 9
5	0 8
6	8
7	0 2

Figure MockQ1.2: Stem and leaf plot of scores of Statistics paper, Key: 4|2 = 42

Stem	Leaf
1	2 2 7

2	1 4 6 7
3	4 4 4
4	5 8 9
5	a

Figure MockQ1.3: Stem and leaf plot of scores of Mathematics paper, Key: 4|0 = 40

If the range of Statistics scores is greater than the range of Mathematics scores by 15, then what is the value of mean of Mathematics scores? Enter the answer correct to two decimals accuracy.

1 point

SMQ4

Annual summary of five employees in an insurance company is given in Table MockQ1.2. If the ratio of insurance policies sold by B and C are in the ratio 5:7, then how many insurance policies did employee B sell? Enter the answer to the integer.

Insurance Employee	Insurance Policies sold	Relative Frequency
A	120	0.15
B		
C		
D	40	0.05
E	160	0.2

Table MockQ1.2: Insurance Dataset

1 point

SMQ5

The weights of meteorites that fell on earth are divided in groups according to their weights in tonnes and tabulated in Table MockQ1.3.

Weights in tonnes	100-300	300-500	500-700	700-900	900-1100
Frequency	10	6	7	7	10

Table MockQ1.3 Meteorites dataset

What is the population variance (in square tonnes) of the meteorites data given in Table MockQ1.3? Enter the answer correct to three decimals accuracy

1 point

SMQ6

Consider various variables that describe different motorcycle models. These variables include **1 point** model name, type of braking system, mileage (km/litre), cooling sytem type, company/maker name, and engine displacement (in cc). Dulquer collected each variable data for 320 different models of motorcycles which are then organised in a data table. Based on this information, choose the correct option(s) from below.

- ☐ Company/maker name is a categorical variable
- ☐ The number of cases/observations in data collected by Dulquer is 160.
- ☐ Company/maker name is a numerical variable
- ☐ The number of cases/observations in data collected by Dulquer is 320.

SMQ7

If the mean and standard deviation of observations $x_1, x_2, x_3, \dots, x_n$ is 35 and 11 respectively, and the mean and standard deviation of observations $a(3x_1 + b), a(3x_2 + b), a(3x_3 + b), \dots, a(3x_n + b)$ are 763 and 231 respectively, then what is the sum of a and b? Enter the answer correct to closet integer.

1 point

SMQ8

If first quartile (Q_1)=34 and third quartile (Q_3)=62, which of the following statements is/are true? **1 point**

- ☐ Median lies in the range [34,62].
- ☐ The population variance is at most 20.
- ☐ The median is 37.
- ☐ The mean is between 34 and 62.
- ☐ Inter Quartile Range is 28.
- ☐ Inter Quartile Range is 48.0.
- ☐ The population standard deviation is at most 4.47 approximately.

Submit Answers