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MATHEMATICS · EAPCET (EAMCET)

Statistics

Previous Year Questions with answers

198 questions · **143** papers · **2014–2026** · newest paper first

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What is in this PDF: every Statistics question we hold from past AP and TS EAPCET (called EAMCET until 2020 in Andhra Pradesh and 2023 in Telangana) papers, with its options and answer. Where an answer comes from a source other than the official final key, it says so next to the answer.

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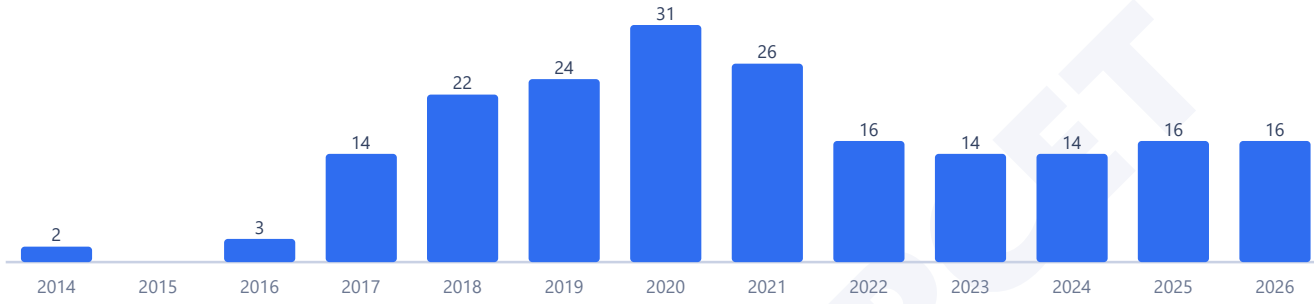
Chapter at a glance

1.2%	198	76 of 77	198 / 0
of Mathematics questions, 2022–2026	questions, 2014–2026	papers asked it, 2022–2026	MCQ / numerical, 2014–2026

Trend. Steady: 1 questions per paper in 2024–2026 against 1 in 2022–2023.

Questions per year



Counts are the questions we hold: 198 in 143 papers. No question in this chapter was found repeated across papers.

Most-asked topics in this chapter (2014–2026)

Measures of Dispersion	185
Measures of Central Tendency	13

How often it comes up

Statistics serves as a focused, steady single-mark component across the EAPCET syllabus, standing at rank 24 of 29 mathematics chapters. Over the long-term testing record spanning 2010 through 2026, Statistics generated 198 questions across 149 evaluated exam papers (appearing in 143 papers, averaging 1.3 questions per paper and a 1.7 percent subject share). In modern sittings from 2022 to 2026, the chapter delivered 76 questions across 77 papers (featured in 76 papers, maintaining an average of 1.0 question per paper and a 1.2 percent subject share).

While it appeared in 76 of 77 papers rather than absolutely every sitting, candidates can reliably anticipate approximately one question in almost any paper. In the recent three-year window spanning 2024 to 2026, Statistics supplied 46 questions across 46 sittings (appearing in all 46 papers, averaging 1.0 question per test and a 1.3 percent share). Over the earlier historical period from 2010 to 2021, the chapter contributed 122 questions across 72 sittings (appearing in 67 papers, 1.7 per test, 2.1 percent share). Comparing early testing with the last three years shows the share is down, while comparing recent testing with the last three years shows the share is about the same. In regional tallies between 2022 and 2026, Andhra Pradesh papers contained 48 questions across 48 papers (all 48 papers, 1.0 per test, 1.3 percent share), while Telangana examinations set 28 questions across 29 papers (present in 28 papers, 1.0 per test, 1.2 percent share).

Most-asked topics

Questions in Statistics partition into two clearly demarcated areas:

- **Measures of Dispersion**: Dominating the chapter with 185 total questions, including 74 in recent testing (consistently set through 2026). Core concepts encompass mean deviation about the mean, mean deviation about the median, variance, standard deviation for discrete and continuous frequency tables, coefficient of variation, and changes in dispersion under linear scale or origin shifts.
- **Measures of Central Tendency**: Supplying 13 total questions, with 2 appearing in recent papers (last tested in 2023). Focus areas involve arithmetic mean, weighted mean, median of grouped data, mode, and empirical

relationships connecting mean, median, and mode.

What the questions look like

Examiners place heavy emphasis on computational accuracy involving variance, standard deviation, and mean deviation.

A very common problem type provides an ungrouped list of observations or grouped intervals and asks for the mean deviation about the median or mean. Another recurring format involves determining the variance or standard deviation when each observation in a data set undergoes a linear transformation like multiplying by a constant or adding an offset. Candidates also frequently encounter combined variance problems, where means, sizes, and variances of two separate groups are merged to compute the total group variance.

How to practise it

Begin by mastering the formulas for variance and standard deviation. The variance of n observations x i is given by one over n times the sum of x i squared, minus the square of the mean. For frequency tables, insert f i into the summations and divide by capital N (the sum of frequencies). Remember that adding or subtracting a constant to every observation leaves the variance and standard deviation completely unchanged, while multiplying every observation by a scalar k multiplies the standard deviation by the absolute value of k and the variance by k squared.

For mean deviation, remember whether the question asks about the mean or the median. If about the median, arrange data in ascending order first, find the middle observation (or average of the two middle observations), and sum the absolute deviations divided by the total number of observations. Finally, memorize the coefficient of variation formula: standard deviation divided by mean, multiplied by one hundred percent. When comparing two groups, the one with the higher coefficient of variation exhibits greater variability and less consistency.

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Q1 AP EAPCET 2026 · 18 May · Shift 1 MCQ

If standard deviation of the data 1, 15, 35, 53, 72 and 64 is x then the variance of the data 62, 70, 51, 33, 13 and -1 is

(A) x
(B) $2x$
(C) $x+2$
(D) x^2

Answer: (D) x^2 · The council's preliminary key

Q2 AP EAPCET 2026 · 18 May · Shift 2 MCQ

Consider the following statements

Statement – I: The variance of the first n even natural numbers is $\frac{n^2-1}{4}$

Statement – II: The difference between the variance of the first 20 even natural numbers and their mean is 112

Which of the following is correct?

(A) Both the statements I and II are true
(B) Both the statements I and II are false
(C) Statement I is false and Statement II is true
(D) Statement I is true and Statement II is false

Answer: (C) Statement I is false and Statement II is true · The council's preliminary key

Q3 AP EAPCET 2026 · 15 May · Shift 1 MCQ

The mean of 5 observations is 5. If three of the observations are 1, 2, 6 and the other two observations are such that each is greater than 5, then the mean deviation from the mean of the observations is

(A) 2.8
(B) 2.6
(C) 2.5
(D) 2.4

Answer: (A) 2.8 · The council's preliminary key

Q4 AP EAPCET 2026 · 15 May · Shift 2 MCQ

The variance of the frequency distribution given below is

Class interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	2	2	3	4	1	3

(A) 264
(B) 88
(C) 84
(D) 90

Answer: (A) 264 · The council's preliminary key

Q5 AP EAPCET 2026 · 14 May · Shift 1 MCQ

If the mean of the set of values $\{3, 6, 9, 10, n\}$ is 9, then the variance of the given set of values is

(A) 19
(B) 22
(C) 24
(D) 15

Answer: (B) 22 · The council's preliminary key

Q6 AP EAPCET 2026 · 14 May · Shift 2 MCQ

The variance of the data $4, 7, 8, 10, 13, 16, 19$ is

(A) 15
(B) 24
(C) 25
(D) 28

Answer: (B) 24 · The council's preliminary key

Q7 AP EAPCET 2026 · 13 May · Shift 1 MCQ

The mean deviation about the mean for the following data is

x_i	1	2	4	7
f_i	3	2	4	1

(A) 3
(B) 2
(C) 1.5
(D) 1.6

Answer: (D) 1.6 · The council's preliminary key

Q8 AP EAPCET 2026 · 13 May · Shift 2 MCQ

The mean and variance of a discrete data $x_i (i = 1, 2, \ldots 15)$ are 35 and 10 respectively. The mean and variance of another discrete data $y_j (j = 1, 2, \ldots 10)$ are 15 and 5 respectively. If these two data are combined, then the variance of the obtained data of 25 items is

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(A) 20
(B) 75
(C) 104
(D) 82

Answer: (C) 104 · The council's preliminary key

Q9 AP EAPCET 2026 · 12 May · Shift 1 MCQ

If the median and mode of 4 observations are 4 , 6 respectively and the sum of the squares of the observations is 48, then their coefficient of variation is

(A) $100\sqrt{3}$
(B) $100/\sqrt{3}$
(C) $100\sqrt{2}$
(D) $100/\sqrt{5}$

Answer: (B) $100/\sqrt{3}$ · The council's preliminary key

Q10 AP EAPCET 2026 · 12 May · Shift 2 MCQ

If R is the range, $\overline{x}$ is the arithmetic mean and M is the mean deviation from the mean of the data $15, 28, 3, 1, 36, 10, 6, 21$, then $\frac{R-\overline{x}}{M} =$

(A) 1
(B) 2
(C) 4
(D) 5

Answer: (B) 2 · The council's preliminary key

Q11 TS EAPCET 2026 · 11 May · Shift 1 MCQ

Mean deviation from the mean for the ungrouped data 8, 7, 15, 12, 12, 60, 15, 6, 65, 4, 6, 18 is

(A) 14.5
(B) 11.16
(C) 12.6
(D) 13.4

Answer: (A) 14.5 · The council's preliminary key

Q12 TS EAPCET 2026 · 11 May · Shift 2 MCQ

Mean and variance of an ungrouped data of 15 numbers are 12 and 14 respectively. For another ungrouped data of 15 numbers the mean and variance are 14 and 10 respectively. If these two data are combined, then the variance of combined data of 30 numbers is

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(A) 12
(B) 16
(C) 13
(D) 15

Answer: (C) 13 · The council's preliminary key

Q13 TS EAPCET 2026 · 10 May · Shift 1 MCQ

The variance of the following continuous frequency distribution is

Class interval	0-10	10-20	20-30
Frequency	3	4	3

(A) 15
(B) 30
(C) 45
(D) 60

Answer: (D) 60 · The council's preliminary key

Q14 TS EAPCET 2026 · 10 May · Shift 2 MCQ

The variance for the following discrete frequency distribution is

x_i	1	3	5	3
f_i	3	5	3	1

(A) 3
(B) 2
(C) 1
(D) 5

Answer: (B) 2 · The council's preliminary key

Q15 TS EAPCET 2026 · 9 May · Shift 1 MCQ

The mean deviation from the median of the given frequency distribution is

Class-interval	1-7	7-13	13-19	19-25	25-31
Frequency	4	5	3	6	2

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(A) 7
(B) 7.5
(C) 6
(D) 5

Answer: (A) 7 · The council's preliminary key

Q16 TS EAPCET 2026 · 9 May · Shift 2 MCQ

The standard deviation of the data $2, 3, 4, 5, 6, 7, 10, 11, 13, 19$ is

(A) $\sqrt{13}$
(B) $\sqrt{8}$
(C) 5
(D) 8

Answer: (C) 5 · The council's preliminary key

Q17 AP EAPCET 2025 · 27 May · Shift 1 MCQ

If $\sum_{i=1}^{9}(x_i - 5) = 9$ and $\sum_{i=1}^{9}(x_i - 5)^2 = 45$, then the standard deviation of the nine observations $x_1, x_2, \ldots, x_9$ is

(A) 2
(B) 4
(C) 3
(D) 9

Answer: (A) 2 · The council's preliminary key

Q18 AP EAPCET 2025 · 26 May · Shift 1 MCQ

Variance of the following continuous frequency distribution is

Class Interval	0–4	4–8	8–12	12–16
Frequency	1	2	2	1

(A) 16
(B) $\frac{44}{3}$
(C) 23
(D) $\frac{22}{3}$

Answer: (B) $\frac{44}{3}$ · The council's preliminary key

Q19 AP EAPCET 2025 · 26 May · Shift 2 MCQ

The mean deviation from the median for the following data is

x_i	9	3	7	2	5

f_i 1 6 2 8 4

(A) $\frac{94}{21}$
(B) $\frac{12}{7}$
(C) $\frac{10}{7}$
(D) $\frac{100}{21}$

Answer: (C) $\frac{10}{7}$ · The council's preliminary key

Q20 AP EAPCET 2025 · 24 May · Shift 1 MCQ

The mean deviation about the mean for the following data is

Class Interval	0–2	2–4	4–6	6–8	8–10
Frequency	1	3	4	1	2

(A) 3
(B) $\frac{20}{11}$
(C) $\frac{40}{11}$
(D) 2

Answer: (B) $\frac{20}{11}$ · The council's preliminary key

Q21 AP EAPCET 2025 · 23 May · Shift 1 MCQ

The mean and variance of the observations $x_1, x_2, x_3, \ldots, x_{15}$ are respectively 2 and 4. If the mean and variance of the observations $y_1, y_2, \ldots, y_{10}$ are respectively 2 and 5, then the variance of the observations $x_1, x_2, \ldots x_{15}, y_1, y_2, \ldots, y_{10}$ is

(A) 6.5
(B) 5.3
(C) 3.4
(D) 4.4

Answer: (D) 4.4 · The council's preliminary key

Q22 AP EAPCET 2025 · 23 May · Shift 2 MCQ

Let $x_1, x_2, \ldots, x_{11}$ be the observations satisfying $\sum_{i=1}^{11}(x_i - 4) = 22$ and $\sum_{i=1}^{11}(x_i - 4)^2 = 154$. If the mean and variance of the observations are α and β, then the quadratic equation having the roots $\frac{\alpha}{\beta}$ and $\frac{\beta}{\alpha}$ is

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(A) $15x^2 - 16x + 15 = 0$
(B) $15x^2 - 34x + 15 = 0$
(C) $x^2 - 16x + 60 = 0$
(D) $12x^2 - 25x + 20 = 0$

Answer: (B) $15x^2 - 34x + 15 = 0$ · The council's preliminary key

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Q23 AP EAPCET 2025 · 22 May · Shift 1 MCQ

The following data represents the frequency distribution of 20 observations

x_i	3	4	5	8	10	11
f_i	$\alpha+2$	$(\alpha-1)^2$	4	$\alpha-1$	2	α

Then its mean deviation about the mean is

(A) 3
(B) 2.4
(C) 2.7
(D) 2.9

Answer: (C) 2.7 · The council's preliminary key

Q24 AP EAPCET 2025 · 22 May · Shift 2 MCQ

Variance of the following discrete frequency distribution is

Class Interval	0-2	2-4	4-6	6-8	8-10
Frequency	2	3	5	3	2

(A) $\frac{463}{15}$
(B) $\frac{838}{15}$
(C) $\frac{44}{5}$
(D) $\frac{88}{15}$

Answer: (D) $\frac{88}{15}$ · The council's preliminary key

Q25 AP EAPCET 2025 · 21 May · Shift 1 MCQ

The variance of the ungrouped data 2, 12, 3, 11, 5, 10, 6,7 is

(A) 11.875
(B) 11
(C) 12
(D) 10.765

Answer: (C) 12 · The council's preliminary key

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Q26 AP EAPCET 2025 · 21 May · Shift 2 MCQ

If the variance of the first n natural numbers is 10 and the variance of the first m even natural numbers is 16, then $n : m =$

(A) $9 : 5$
(B) $7 : 3$
(C) $11 : 7$
(D) $5 : 8$

Answer: (C) $11 : 7$ · The council's preliminary key

Q27 TS EAPCET 2025 · 4 May · Shift 1 MCQ

The coefficient of variation for the following data is

Class interval	0-2	2-4	4-6	6-8	8-10
Frequency	2	3	5	3	2

(A) $\frac{8\sqrt{22}}{3}$
(B) $\frac{8\sqrt{110}}{\sqrt{3}}$
(C) $\frac{4\sqrt{110}}{\sqrt{3}}$
(D) $\frac{4\sqrt{22}}{3}$

Answer: (B) $\frac{8\sqrt{110}}{\sqrt{3}}$ · The council's preliminary key

Q28 TS EAPCET 2025 · 4 May · Shift 2 MCQ

The mean deviation about median of the numbers $3x, 6x, 9x, \ldots, 81x$ is 91, then $|x| =$

(A) 4
(B) $\frac{5}{2}$
(C) $\frac{9}{2}$
(D) 8

Answer: (C) $\frac{9}{2}$ · The council's preliminary key

Q29 TS EAPCET 2025 · 3 May · Shift 1 MCQ

The variance of the discrete data 3, 4, 5, 6, 7, 8, 10, 13 is

(A) 7.5
(B) 8
(C) 9.5
(D) 9

Answer: (C) 9.5 · The council's preliminary key

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Q30 TS EAPCET 2025 · 3 May · Shift 2 MCQ

The mean deviation from the mean of the discrete data 2, 3, 5, 7, 11, 13, 17, 19, 22 is

(A) 8
(B) 7.5
(C) 5.5
(D) 6

Answer: (D) 6 · The council's preliminary key

Q31 TS EAPCET 2025 · 2 May · Shift 1 MCQ

The mean deviation from the median for the following data is

x_i	2	9	8	3	5	7
f_i	5	3	1	6	6	1

(A) 2
(B) $\frac{8}{3}$
(C) $\frac{9}{2}$
(D) 9

Answer: (A) 2 · The council's preliminary key

Q32 TS EAPCET 2025 · 2 May · Shift 2 MCQ

If the variance of the numbers $9, 15, 21, \ldots, (6n+3)$ is P, then the variance of the first n even numbers is

(A) $9\mathrm{P}$
(B) $3\mathrm{P}$
(C) $\frac{\mathrm{P}}{9}$
(D) $\frac{\mathrm{P}}{3}$

Answer: (C) $\frac{\mathrm{P}}{9}$ · The council's preliminary key

Q33 AP EAPCET 2024 · 23 May · Shift 1 MCQ

If the mean of the data $7, 8, 9, 7, 8, 7, \lambda, 8$ is 8 then variance of the data

(A) 2
(B) $\frac{7}{8}$
(C) $\frac{9}{8}$
(D) 1

Answer: (D) 1 · The council's preliminary key

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Q34 AP EAPCET 2024 · 22 May · Shift 1 MCQ

If $x_1, x_2, x_3 \ldots x_n$ are n observations such that $\sum(x_i + 2)^2 = 28n$ and $\sum(x_i - 2)^2 = 12n$, then the variance is:

(A) 12
(B) 14
(C) 16
(D) 20

Answer: (A) 12 · The council's preliminary key

Q35 AP EAPCET 2024 · 22 May · Shift 2 MCQ

Based on the following statements, choose the correct option

Statement-I: The variance of the first n even natural numbers is $\frac{n^2-1}{4}$

Statement-II: The difference between the variance of the first 20 even natural numbers and their arithmetic mean is 112

(A) Both Statements are true and II is a correct explanation of I
(B) Both Statements are true but II is not a correct explanation of I
(C) Statement-I is true and Statement-II is false
(D) Statement-I is false and Statement-II is true

Answer: (D) Statement-I is false and Statement-II is true · The council's preliminary key

Q36 AP EAPCET 2024 · 21 May · Shift 1 MCQ

Mean deviation about the mean for the following data is

Class Interval	**0-6**	**6-12**	**12-18**	**18-24**	**24-30**
Frequency	1	2	3	2	1

(A) 5
(B) $\frac{16}{3}$
(C) 6
(D) $\frac{19}{3}$

Answer: (B) $\frac{16}{3}$ · The council's preliminary key

Q37 AP EAPCET 2024 · 21 May · Shift 2 MCQ

The coefficient of variation for the frequency distribution is

x_i	**4**	**3**	**1**
f_i	1	3	5

(A) $\frac{50}{\sqrt{3}}$
(B) $\frac{125}{2\sqrt{3}}$
(C) $\frac{100}{3\sqrt{2}}$
(D) $\frac{100}{\sqrt{3}}$

Answer: (D) $\frac{100}{\sqrt{3}}$ · The council's preliminary key

Q38 AP EAPCET 2024 · 20 May · Shift 1 MCQ

$\bar{x}$ and $\bar{y}$ are the arithmetic means of the runs of two batsmen A and B in 10 innings respectively and σ_A, σ_B are the standard deviations of their runs in them. If batsman A is more consistent than B, then he is also a higher run scorer only when

(A) $0 < \frac{\sigma_A}{\sigma_B} < \frac{\bar{x}}{\bar{y}};\ \frac{\bar{x}}{\bar{y}} > 1$
(B) $\frac{\bar{x}}{\bar{y}} > \frac{\sigma_A}{\sigma_B} > 1$
(C) $\frac{\bar{x}}{\bar{y}} < \frac{\sigma_A}{\sigma_B} < 1$
(D) $\frac{\bar{x}}{\bar{y}} > 1;\ 1 \leq \frac{\bar{x}}{\bar{y}} < \frac{\sigma_A}{\sigma_B}$

Answer: (A) $0 < \frac{\sigma_A}{\sigma_B} < \frac{\bar{x}}{\bar{y}};\ \frac{\bar{x}}{\bar{y}} > 1$ · The council's preliminary key

Q39 AP EAPCET 2024 · 20 May · Shift 2 MCQ

If the mean deviation about the mean is m and variance is σ^2 for the following data, then $m + \sigma^2 =$

x	1	3	5	7	9
f	4	24	28	16	8

(A) 8
(B) 7.2
(C) $\frac{28}{5}$
(D) 6

Answer: (D) 6 · The council's preliminary key

Q40 AP EAPCET 2024 · 19 May · Shift 2 MCQ

If m and M denote the mean deviations about mean and about median respectively of the data 20, 5, 15, 2, 7, 3, 11 then the mean deviation about the mean of m and M is

(A) $\frac{1}{7}$
(B) $\frac{38}{7}$
(C) $\frac{36}{7}$
(D) $\frac{37}{7}$

Answer: (A) $\frac{1}{7}$ · The council's preliminary key

Q41 AP EAPCET 2024 · 18 May · Shift 1 MCQ

For a set of observations, if the coefficient of variation is 25 and mean is 44, then the variance is

(A) 11
(B) 121
(C) 110
(D) 19

Answer: (B) 121 · The council's preliminary key

Q42 TS EAPCET 2024 · 11 May · Shift 1 MCQ

The variance of the data: 1, 2, 3, 5, 8, 13, 17 is approximately

(A) 31.14
(B) 29.57
(C) 30.62
(D) 32.71

Answer: (A) 31.14 · The council's preliminary key

Q43 TS EAPCET 2024 · 10 May · Shift 1 MCQ

If M_1 is the mean deviation from the mean of the discrete data 44, 5, 27, 20, 8, 54, 9, 14, 35 and M_2 is the mean deviation from the median of the same data, then $M_1 - M_2 =$

(A) $\frac{7}{9}$
(B) $\frac{2}{3}$
(C) $\frac{5}{9}$
(D) $\frac{4}{9}$

Answer: (D) $\frac{4}{9}$ · The council's preliminary key

Q44 TS EAPCET 2024 · 10 May · Shift 2 MCQ

The variance of the first 10 natural numbers which are multiples of 3 is

(A) 53
(B) 73
(C) 52.5
(D) 74.25

Answer: (D) 74.25 · The council's preliminary key

Q45 TS EAPCET 2024 · 9 May · Shift 1 MCQ

The mean deviation about the mean for the following data is

Class interval 0 - 2 | 2 - 4 | 4 - 6 | 6 - 8 | 8 - 10

Frequency 1 3 5 3 1

(A) 2

(B) $\frac{15}{13}$

(C) $\frac{22}{13}$

(D) $\frac{20}{13}$

Answer: (D) $\frac{20}{13}$ · The council's preliminary key

Q46 TS EAPCET 2024 · 9 May · Shift 2 MCQ

The variance of the following continuous frequency distribution is

Class interval 0 - 4 | 4 - 8 | 8 - 12 | 12 - 16

Frequency 2 3 2 1

(A) $\frac{128}{7}$

(B) 15

(C) 19

(D) $\frac{130}{7}$

Answer: (B) 15 · The council's preliminary key

Q47 AP EAPCET 2023 · 19 May · Shift 1 MCQ

The mean deviation from the mean for the data $6, 7, 10, 12, 13, 4, 12, 16$ is

(A) 3.25

(B) 3.52

(C) 3.33

(D) 2.35

Answer: (A) 3.25 · The council's preliminary key

Q48 AP EAPCET 2023 · 18 May · Shift 1 MCQ

Which one of the following is false?

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(A) Mean deviation from the mean and the Mean deviation from the Median must always be equal.
(B) The measure of variability which is a number independent of units, is called the coefficient of variation
(C) The coefficient of variation is a relative measure of variation
(D) Among two given data, the one having greater coefficient of variation is said to have more variability than the other.

Answer: (A) Mean deviation from the mean and the Mean deviation from the Median must always be equal. · The council's preliminary key

Q49 AP EAPCET 2023 · 18 May · Shift 2 MCQ

Students of two sections A and B of a class show the following results in a test conducted for 100 marks.

	Section A	Section B
Number of students	50	60
Average marks in the test	45	45
Variance of distribution of marks	64	81

Then

(A) variability of section B > variability of section A
(B) variability of section A > variability of section B
(C) variability of section A = variability of section B
(D) The data is not sufficient to compare the variability of the sections

Answer: (A) variability of section B > variability of section A · The council's preliminary key

Q50 AP EAPCET 2023 · 17 May · Shift 1 MCQ

If each of the observations $x_1, x_2, \ldots, x_n$ is increased or decreased by k, where k is a positive number, then the variance of the data thus obtained

(A) increases by k
(B) do not change
(C) is equal to k^2
(D) is equal to 2k

Answer: (B) do not change · The council's preliminary key

Q51 AP EAPCET 2023 · 17 May · Shift 2 MCQ

An analysis of monthly wages paid to the workers of two jute mills A and B gives the following data:

	Mill - A	Mill - B
No. of workers	500	600
Average daily wage (in rupees)	186	175

Variance of distribution of wages 81 100

Then

(A) wage bill of mill A is twice that of mill B

(B) mills A and B both have same wage bills.

(C) wage bill of mill A is greater than that of mill B

(D) wage bill of mill B is greater than that of mill A

Answer: (D) wage bill of mill B is greater than that of mill A · The council's preliminary key

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Q52 AP EAPCET 2023 · 16 May · Shift 1 MCQ

If the sum of squares of the deviations from the mean of the data x_i, $(i = 1, 2, ..., n)$ is $n\overline{x}^2$, where $\overline{x}$ is the mean of x_i 's, then the sum of squares of x_i 's is

(A) $4n\overline{x}^2$

(B) $3n\overline{x}^2$

(C) $12n\overline{x}^2$

(D) $2n\overline{x}^2$

Answer: (D) $2n\overline{x}^2$ · The council's preliminary key

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Q53 AP EAPCET 2023 · 16 May · Shift 2 MCQ

If $x_1, x_2, \ldots x_n$ are 'n' observations and $\bar{x}$ is their mean. If $\sum_{i=1}^{n}(x_i - \bar{x})^2$ is almost zero, then a true statement among the following is

(A) It indicates a higher degree of dispersion of the observations from the mean $\bar{x}$

(B) It indicates that there is no dispersion

(C) $\sum_{i=1}^{n}(x_i - \bar{x})^2$ is the arithmetic mean of the data

(D) It indicates that each observation x_i is very close to the mean $\bar{x}$ and hence degree of dispersion is low.

Answer: (D) It indicates that each observation x_i is very close to the mean $\bar{x}$ and hence degree of dispersion is low. · The council's preliminary key

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Q54 AP EAPCET 2023 · 15 May · Shift 1 MCQ

The variance of 20 observations is 5. If each one of the observations is multiplied by 2, then the variance of the resulting observations is

(A) 40

(B) 80

(C) 20

(D) 10

Answer: (C) 20 · The council's preliminary key

Q55 AP EAPCET 2023 · 15 May · Shift 2 MCQ

The mean of 5 observations is 4.4 and their variance is 8.24. If three of those observations are 1,2 and 6, then the other two observations are

(A) 9, 4
(B) 9, 5
(C) 9, 2
(D) 9, 13

Answer: (A) 9, 4 · The council's preliminary key

Q56 TS EAMCET 2023 · 14 May · Shift 1 MCQ

The variance of 50 observations is 7. Suppose that each observation in this data is multiplied by 6 and then 5 is subtracted from it. Then the variance of that new data is

(A) 37
(B) 42
(C) 247
(D) 252

Answer: (D) 252 · The council's preliminary key

Q57 TS EAMCET 2023 · 14 May · Shift 2 MCQ

The mean and standard deviation of 100 observations were calculated as 40 and 5.1 respectively. Later on it was found that one of the observations was taken as 50 in the place of 40. If the wrong entry is replaced by the correct one, then the sum of the squares of all the observations is

(A) 162701
(B) 163501
(C) 162601
(D) 161701

Answer: (D) 161701 · The council's preliminary key

Q58 TS EAMCET 2023 · 13 May · Shift 1 MCQ

If the variance of the data 2, 3, 5, 8, 12 is σ^2 and the mean deviation from the median for this data is M, then $\sigma^2 - M =$

(A) 10.2
(B) 5.8
(C) 10.6
(D) 8.2

Answer: (A) 10.2 · The council's preliminary key

Q59 TS EAMCET 2023 · 13 May · Shift 2 MCQ

If M and σ^2 represent respectively the mean deviation from the mean and the variance for the data 1, 3, 5, 7, 11, 13, 17, 19, 23 then $3(\sigma^2 - M) =$

(A) 232
(B) 112
(C) 224
(D) 136

Answer: (D) 136 · The council's preliminary key

Q60 TS EAMCET 2023 · 12 May · Shift 2 MCQ

Assertion (A): The variance of the first n odd natural numbers is $\frac{n^2-1}{3}$.

Reason (R): The sum of the first n odd natural numbers is n^2 and the sum of the squares of the first n odd natural numbers is $\frac{n(4n^2-1)}{3}$.

Which of the following alternatives is correct?

(A) (A) and (R) are true. (R) is correct explanation of (A)
(B) (A) and (R) are true, but (R) is not a correct explanation of (A)
(C) (A) is true, but (R) is false
(D) (A) is false, but (R) is true

Answer: (A) (A) and (R) are true. (R) is correct explanation of (A) · The council's preliminary key

Q61 TS EAMCET 2022 · 20 Jul · Shift 1 MCQ

If 10 is the mean deviation of 'n' observations $x_1, x_2, x_3, \ldots, x_n$ then the mean deviation of the observations $\frac{2x_1+5}{3}, \frac{2x_2+5}{3}, \frac{2x_3+5}{3}, \ldots, \frac{2x_n+5}{3}$ is

(A) $\frac{25}{3}$
(B) $\frac{40}{9}$
(C) $\frac{20}{3}$
(D) 15

Answer: (C) $\frac{20}{3}$ · The council's preliminary key

Q62 TS EAMCET 2022 · 20 Jul · Shift 2 MCQ

Statement (I) : The range of the ungrouped data does not change even if certain intermediate observations are removed.
Statement (II) : The value of the mean deviation of an ungrouped data about the median is always less than or equal to the value of the mean deviation computed about any other measure of central tendency.

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Statement (III): For a grouped data, range is approximated as the difference between the lower limit of the largest class and the upper limit of the smallest class.

(A) Statements I and II are true but statement III is false
(B) Statements II and III are true but statement I is false
(C) Statement III and I are true but statement II is false
(D) Statements I, II and III are true

Answer: (A) Statements I and II are true but statement III is false · The council's preliminary key

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Q63 TS EAMCET 2022 · 19 Jul · Shift 1 MCQ

The mean deviation from the mean for the observations 1, 3, 5, 7, 11, 13, 17, 19, 23 is

(A) 6
(B) $11\frac{4}{9}$
(C) 11
(D) $6\frac{2}{9}$

Answer: (D) $6\frac{2}{9}$ · The council's preliminary key

Q64 TS EAMCET 2022 · 19 Jul · Shift 2 MCQ

There are n observations and all of them are negative numbers. The ascending order of these observations is $x_1, x_2, \ldots, x_n$. If the signs of the first term and last term in that order are changed, then the range of the data is

(A) $|x_1| - |x_n|$
(B) $|x_n - x_1|$
(C) $|x_1| - x_2$
(D) $|x_1| - |x_2|$

Answer: (C) $|x_1| - x_2$ · The council's preliminary key

Q65 TS EAMCET 2022 · 18 Jul · Shift 1 MCQ

If $\bar{x}$ is the mean of n observations $x_1, x_2, \ldots, x_n$ then the mean of the absolute deviations of these observations from $\bar{x}$ is

(A) the variance of the data
(B) the mean proportion of the data
(C) the standard deviation of the data
(D) the mean deviation of the data

Answer: (D) the mean deviation of the data · The council's preliminary key

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Q66 TS EAMCET 2022 · 18 Jul · Shift 2 MCQ

The mean deviation from the mean of the discrete data 1, 3, 4, 7, 11, 18, 29, 47, 78 is

(A) 22
(B) 24
(C) $\frac{176}{9}$
(D) $\frac{182}{9}$

Answer: (C) $\frac{176}{9}$ · The council's preliminary key

Q67 AP EAPCET 2022 · 8 Jul · Shift 1 MCQ

The mean deviation about the median for the following data 6,3,4,9,2,7 and 11 is

(A) 1.89
(B) 2.57
(C) 3.14
(D) 6.23

Answer: (B) 2.57 · The council's preliminary key

Q68 AP EAPCET 2022 · 8 Jul · Shift 2 MCQ

The mean deviation from the median for the following data is

x	10	11	12	13
f	6	12	18	12

(A) 0.75
(B) 7.5
(C) 0.65
(D) 0.40

Answer: (A) 0.75 · The council's preliminary key

Q69 AP EAPCET 2022 · 7 Jul · Shift 1 MCQ

The range of the data 35, 12, 21, 24, 15, 7, 16, 12, 30, 32, 13, 17 is

(A) 28
(B) 42
(C) 17
(D) 21

Answer: (A) 28 · The council's preliminary key

Q70 AP EAPCET 2022 · 7 Jul · Shift 2 MCQ

The standard deviation of first 10 multiples of 4 is

(A) 7
(B) 8
(C) 11.5
(D) 14

Answer: (C) 11.5 · The council's preliminary key

Q71 AP EAPCET 2022 · 6 Jul · Shift 1 MCQ

If the total number of observations is 20, $\sum x_i = 1000$ and $\sum x_i^2 = 84000$, then the variance of the distribution is

(A) 1500
(B) 1600
(C) 1700
(D) 1800

Answer: (C) 1700 · The council's preliminary key

Q72 AP EAPCET 2022 · 6 Jul · Shift 2 MCQ

If the variance of four numbers w,x,y and z is 9, then the variance of 5w, 5x, 5y and 5z is

(A) 225
(B) $5/9$
(C) 45
(D) 54

Answer: (A) 225 · The council's preliminary key

Q73 AP EAPCET 2022 · 5 Jul · Shift 1 MCQ

If the mean deviation of the data $1, 1+d, 1+2d, \ldots, 1+100d$, $(d > 0)$ from their mean is 255, then 'd' is equal to

(A) 10.1
(B) 10.2
(C) 10.3
(D) 10.4

Answer: (A) 10.1 · The council's preliminary key

Q74 AP EAPCET 2022 · 5 Jul · Shift 2 MCQ

The mean deviation about the mean for the following data:

Marks obtained	0-20	20-40	40-60	60-80	80-100
Number of students	10	8	12	9	11

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(A) 14.33
(B) 15.66
(C) 18
(D) 22.08

Answer: (D) 22.08 · The council's preliminary key

Q75 AP EAPCET 2022 · 4 Jul · Shift 1 MCQ

The mean deviation about the mean for the following data:
5,6,7,8,6,9,13,12,15 is

(A) 1.55
(B) 2.88
(C) 3.89
(D) 5

Answer: (B) 2.88 · The council's preliminary key

Q76 AP EAPCET 2022 · 4 Jul · Shift 2 MCQ

If the mean of the data p,6,6,7,8,11,15,16, is 3 times p, then the mean deviation of the data from its mean is

(A) 2.25
(B) 3.75
(C) 4.4
(D) 2.5

Answer: (B) 3.75 · The council's preliminary key

Q77 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

The mean of five observations is 4. Four of these observations are 1, 2, 4, 6. Then variance of the five observations is

(A) 5
(B) 7
(C) 5.2
(D) 5.1

Answer: (C) 5.2 · The council's preliminary key

Q78 AP EAPCET 2021 · 5 Oct · Shift 1 MCQ

The variance of the following data 180, 198, 90, 126, 72, 144, 18, 81, 27, 54 is

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(A) 30618
(B) 3402
(C) 378
(D) 42

Answer: (B) 3402 · The council's preliminary key

Q79 AP EAPCET 2021 · 25 Aug · Shift 1 MCQ

The mean marks of 25 boys in a class is 61 and the mean marks of 35 girls in the same class is 58. Then the mean of all 60 students is _____

(A) 56.25
(B) 59.25
(C) 57.25
(D) 63.25

Answer: (B) 59.25 · The council's preliminary key

Q80 AP EAPCET 2021 · 25 Aug · Shift 1 MCQ

The arithmetic mean of five natural numbers is 40. The largest exceeds the smallest number by 10. If α is the maximum possible value for the largest of these 5 numbers, then the number of positive integral divisors of α is _____

(A) 12
(B) 10
(C) 9
(D) 5

Answer: (B) 10 · The council's preliminary key

Q81 AP EAPCET 2021 · 25 Aug · Shift 2 MCQ

If for a distribution, $\sum(x-5)=3$, $\sum(x-5)^2=43$ and total no. of observations is 18, then the variance of the distribution is

(A) 2.16
(B) 3.16
(C) 2.36
(D) 3.36

Answer: (C) 2.36 · The council's preliminary key

Q82 AP EAPCET 2021 · 25 Aug · Shift 2 MCQ

The possible values of x if S.D of the numbers $2, 3, 2x$ and 11 is 3.5 is equal to

(A) $4, \frac{5}{3}$
(B) $5, \frac{7}{3}$
(C) $3, \frac{7}{3}$
(D) $2, \frac{5}{3}$

Answer: (C) $3, \frac{7}{3}$ · The council's preliminary key

Q83 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

The mean of set of 'n' numbers when each in divided by 5 is $\frac{X}{5}$, then mean of the 'n' number is

(A) $5\vec{X}$
(B) X
(C) $25X$
(D) $\frac{X}{25}$

Answer: (B) X · The council's preliminary key

Q84 AP EAPCET 2021 · 24 Aug · Shift 1 MCQ

The mean of the squares of first 'n' natural numbers is

(A) $\left[\frac{n(n+1)}{2}\right]^2$
(B) $\frac{2n^2-3n+1}{6}$
(C) $\frac{2n^2+3n+1}{6}$
(D) $\frac{n(n+1)(2n+1)}{6}$

Answer: (C) $\frac{2n^2+3n+1}{6}$ · The council's preliminary key

Q85 AP EAPCET 2021 · 24 Aug · Shift 2 MCQ

The arithmetic mean of the following discrete data 12, 14, 20, 23, 25, 32 is given by

(A) 22
(B) 21.75
(C) 21
(D) 20.5

Answer: (C) 21 · The council's preliminary key

Q86 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

Which of the following data has minimum variance?

(A) $1, 2, 3, 4, 5$
(B) $1, 1, 2, 3, 6$
(C) $1, 1, 2, 3, 5$
(D) $1, 1, 2, 2, 5$

Answer: (A) $1, 2, 3, 4, 5$ · The council's preliminary key

Q87 AP EAPCET 2021 · 23 Aug · Shift 1 MCQ

For the set $A = \{x_1, x_2, x_3, x_4, x_5\}$ the variance is 4 and the mean is 2. For the set $B = \{y_1, y_2, y_3, y_4, y_5\}$ the variance is 5 and the mean is 4. Then the variance of $A \cup B$ is _____

(A) 6
(B) 6.5
(C) 5.5
(D) 5

Answer: (C) 5.5 · The council's preliminary key

Q88 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

The mean of the numbers $a, b, 8, 5, 10$ is 6 and the variance is 6.80, then the possible values of a and b are

(A) $a = 2, b = 3$
(B) $a = 4, b = 5$
(C) $a = 1, b = 3$
(D) $a = 3, b = 4$

Answer: (D) $a = 3, b = 4$ · The council's preliminary key

Q89 AP EAPCET 2021 · 23 Aug · Shift 2 MCQ

In a distribution of 10 observation, the sum of the observations is 60 and sum of their squares is 1000, then the variance is

(A) 8
(B) 64
(C) 32
(D) 40

Answer: (B) 64 · The council's preliminary key

Q90 AP EAPCET 2021 · 20 Aug · Shift 1 MCQ

The mean deviation from the mean of the set of observations $-1, 0, 4$ is

(A) 3
(B) 1
(C) -2
(D) 2

Answer: (D) 2 · The council's preliminary key

Q91 AP EAPCET 2021 · 20 Aug · Shift 1 MCQ

Let an angle of a triangle is 60°. If the variance of the angles of the triangle is 1014°, then the other two angles are

(A) 23° and 97°
(B) 22° and 98°
(C) 21° and 99°
(D) 20° and 100°

Answer: (C) 21° and 99° · The council's preliminary key

Q92 AP EAPCET 2021 · 20 Aug · Shift 2 MCQ

If the mean of a data $\vec{x}$ is 10 and if all the observations are multiplied by 2, then the mean of new data is

(A) 30
(B) 15
(C) 50
(D) 20

Answer: (D) 20 · The council's preliminary key

Q93 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

The variance of the variates $112, 116, 120, 125, 132$ about their A.M is

(A) 58.8
(B) 60
(C) 48.8
(D) 61.8

Answer: (C) 48.8 · The council's preliminary key

Q94 AP EAPCET 2021 · 19 Aug · Shift 1 MCQ

Which of the following set of data has least standard deviation?

(A) $10, 20, 30, 40$
(B) $2, 4, 6, 8$
(C) $3, 6, 9, 12$
(D) $1, 2, 3, 4$

Answer: (D) $1, 2, 3, 4$ · The council's preliminary key

Q95 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

The mean and variance of 'n' observations $x_1, x_2, x_3, \ldots, x_n$ are 5 and 0 respectively. If $\sum_{i=1}^{n} x_i^2 = 400$, then the value of 'n' is equal to

(A) 80
(B) 25
(C) 20
(D) 16

Answer: (D) 16 · The council's preliminary key

Q96 AP EAPCET 2021 · 19 Aug · Shift 2 MCQ

Mean of the values $\sin^2 10^\circ, \sin^2 20^\circ, \sin^2 30^\circ, \ldots, \sin^2 90^\circ$ is _____

(A) $\frac{5}{9}$
(B) $\frac{2}{3}$
(C) $\frac{7}{9}$
(D) $\frac{1}{9}$

Answer: (A) $\frac{5}{9}$ · The council's preliminary key

Q97 TS EAMCET 2021 · 6 Aug · Shift 1 MCQ

The mean deviation about the median of the discrete data 12, 15, 7, 4, 4, 15, 23, 14 is

(A) 5
(B) 8
(C) 13
(D) 10

Answer: (A) 5 · The council's preliminary key

Q98 TS EAMCET 2021 · 6 Aug · Shift 2 MCQ

When a die is rolled 42 times it is so happened that a face having the digit i occurred $2i$ times. The mean deviation from the mean of this discrete frequency distribution is

(A) $\frac{80}{63}$
(B) $\frac{32}{3}$
(C) $\frac{72}{41}$
(D) $\frac{15}{4}$

Answer: (A) $\frac{80}{63}$ · The council's preliminary key

Q99 TS EAMCET 2021 · 5 Aug · Shift 1 MCQ

Let O be the mean deviation of the first five odd natural numbers about their mean and P be the mean deviation of the first five prime numbers about their mean. Then $P - O =$

(A) 0.3
(B) 0.32
(C) 0.23
(D) 0.2

Answer: (B) 0.32 · The council's preliminary key

Q100 TS EAMCET 2021 · 5 Aug · Shift 2 MCQ

If M_1 and M_2 are the mean deviations from mean and median of the first 15 even integers then $M_1 + M_2 =$

(A) $\frac{112}{15}$
(B) $\frac{224}{15}$
(C) $\frac{56}{15}$
(D) $\frac{28}{15}$

Answer: (B) $\frac{224}{15}$ · The council's preliminary key

Q101 TS EAMCET 2021 · 4 Aug · Shift 1 MCQ

If 10 is the mean of the data 2, 3, 5, 18, 17, 15, 13, x, 9 and 7, then the mean deviation of this data about its mean is

(A) 4.7
(B) 4.8
(C) 4.9
(D) 5.0

Answer: (B) 4.8 · The council's preliminary key

Q102 TS EAMCET 2021 · 4 Aug · Shift 2 MCQ

If 65 is the range of the ungrouped data 50, 70, 60, B, 20, 40, then the absolute difference of the possible values of B is

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(A) 90
(B) 20
(C) 80
(D) 65

Answer: (C) 80 · The council's preliminary key

Q103 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

If the mean of two samples of sizes 20 and 30 are 25 and 10 respectively, their variances are 9 and 16 respectively, their combined variance is _____

(A) 67.9
(B) 68.2
(C) 68.1
(D) 67.2

Answer: (D) 67.2 · The council's preliminary key

Q104 AP EAMCET 2020 · 7 Oct · Shift 1 MCQ

If the arithmetic mean of the following frequency table is 50, then

Class | Frequency
0 - 20 | 17
20 - 40 | f_1
40 - 60 | 32
60 - 80 | f_2
80 - 100 | 19
Total | 120

(A) $f_1 = 27,\ f_2 = 35$
(B) $f_1 = 30,\ f_2 = 22$
(C) $f_1 = 28,\ f_2 = 24$
(D) $f_1 = 32,\ f_2 = 20$

Answer: (C) $f_1 = 28,\ f_2 = 24$ · The council's preliminary key

Q105 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

Find the least positive value of k, if the range of $15, 14, k, 25, 30, 35$ is 23

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(A) 11
(B) 13
(C) 12
(D) 14

Answer: (C) 12 · The council's preliminary key

Q106 AP EAMCET 2020 · 23 Sep · Shift 1 MCQ

The range of the observations $20, 28, 40, 12, 30, 15, 50$ is _____

(A) 18
(B) 38
(C) 28
(D) 16

Answer: (B) 38 · The council's preliminary key

Q107 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

The standard deviation and mean of five observations are 0 and 9 respectively. If one of the observations is changed such that the mean of the new set of five observations becomes 10, then their standard deviation is _____

(A) 1
(B) 2
(C) 3
(D) 0

Answer: (B) 2 · The council's preliminary key

Q108 AP EAMCET 2020 · 22 Sep · Shift 1 MCQ

Calculate variance if $\sum x_i^2 = 18000$ and $\sum x_i = 960$, for 60 observations

(A) 44
(B) 22
(C) 32
(D) 6.63

Answer: (A) 44 · The council's preliminary key

Q109 AP EAMCET 2020 · 22 Sep · Shift 2 MCQ

What is the relation between mean and median of a discrete data?

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(A) They are always equal
(B) They are always not equal
(C) Sometimes they are equal
(D) No relation exists between them

Answer: (C) Sometimes they are equal · The council's preliminary key

Q110 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

What is the formula for finding co-efficient of variation, given σ = standard deviation and $\bar{x}$ = mean $\neq 0$?

(A) $\frac{\bar{x}}{\sigma} \times 100$
(B) $\frac{\bar{x}}{\sigma}$
(C) $\frac{\sigma}{\bar{x}}$
(D) $\frac{\sigma}{\bar{x}} \times 100$

Answer: (D) $\frac{\sigma}{\bar{x}} \times 100$ · The council's preliminary key

Q111 AP EAMCET 2020 · 21 Sep · Shift 1 MCQ

The mean of 5 observations is 15 and variance is 9. If two observations having values -5 and 13 are combined with these observations, then what will be the new variance?

(A) $\frac{6259}{7}$
(B) $\frac{6259}{49}$
(C) $\frac{2659}{7}$
(D) $\frac{2659}{49}$

Answer: (D) $\frac{2659}{49}$ · The council's preliminary key

Q112 AP EAMCET 2020 · 21 Sep · Shift 2 MCQ

The average marks of boys in a class is 40 and that of girls is 45. The average marks of both boys and girls combined is 42. Then the percentage of boys in the class is

(A) $60\ \%$
(B) $30\ \%$
(C) $40\ \%$
(D) $50\ \%$

Answer: (A) $60\ \%$ · The council's preliminary key

Q113 AP EAMCET 2020 · 21 Sep · Shift 2 MCQ

The mean deviation from the mean of the series $(a), (a+d), (a+2d), \ldots, (a+2nd)$ is

(A) $\frac{n(n-1)d}{2n+1}$
(B) $\frac{n(n+1)d}{2n+1}$
(C) $(n(n+1)d)$
(D) $\frac{n(n+1)d}{2n}$

Answer: (B) $\frac{n(n+1)d}{2n+1}$ · The council's preliminary key

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Q114 AP EAMCET 2020 · 18 Sep · Shift 2 MCQ

What is the value of x if the mean of $8, 6, 7, 5, x$ and 4 is 7 ?

(A) 10
(B) 12
(C) 8
(D) 6

Answer: (B) 12 · The council's preliminary key

Q115 AP EAMCET 2020 · 17 Sep · Shift 1 MCQ

If the standard deviation of the numbers $2, 3, 2x$ and 11 is 3.5, find the possible values of x.

(A) $2, \frac{7}{2}$
(B) $3, \frac{5}{3}$
(C) $2, \frac{5}{2}$
(D) $3, \frac{7}{3}$

Answer: (D) $3, \frac{7}{3}$ · The council's preliminary key

Q116 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

The mean deviation about the mean of the set of first 'n' natural numbers, when 'n' is an even number, is equal to

(A) n
(B) $\frac{n}{2}$
(C) $\frac{n}{3}$
(D) $\frac{n}{4}$

Answer: (D) $\frac{n}{4}$ · The council's preliminary key

Q117 AP EAMCET 2020 · 17 Sep · Shift 2 MCQ

If the mean of 100 observations is 50 and their standard deviation is 5, then the sum of squares of all observations is _____

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(A) $50,000$
(B) $2,50,000$
(C) $2,52,500$
(D) $2,55,000$

Answer: (C) $2,52,500$ · The council's preliminary key

Q118 TS EAMCET 2020 · 14 Sep · Shift 1 MCQ

The mean and standard deviation of 100 observations $x_1, x_2, \ldots\ldots x_{100}$ were calculated as 40 and 5.1 respectively by a student who took by mistake 50 instead of 40 for one observation. Then the correct value of $\sum_{i=1}^{100} x_i^2 =$

(A) 3990
(B) 161701
(C) 162601
(D) 4000

Answer: (B) 161701 · Official TGCHE final key

Q119 TS EAMCET 2020 · 14 Sep · Shift 1 MCQ

The coefficient of variation of the first 5 prime numbers is

(A) $\frac{400}{7}$
(B) $\frac{406}{7}$
(C) $\frac{416}{7}$
(D) $\frac{425}{8}$

Answer: (A) $\frac{400}{7}$ · Official TGCHE final key

Q120 TS EAMCET 2020 · 14 Sep · Shift 2 MCQ

In a discrete data $\frac{1}{4}^{th}$ of the observations are equal to a, another $\frac{1}{4}^{th}$ of the observations are equal to $-a$. Out of the remaining, half of them are equal to b and the rest are equal to $-b$. If the variance of all the observations is $(a\ b)$ (sic), then

(A) $a^2 = 4b^2$
(B) $a = -2b$
(C) $a = b$
(D) $a = -3b$

Answer: (C) $a = b$ · Official TGCHE final key

Q121 TS EAMCET 2020 · 14 Sep · Shift 2 MCQ

For the following distribution, the mean deviation about the median is
x_i: 6, 12, 18, 24, 30, 36, 42

f_i: 4, 7, 9, 18, 15, 10, 5

(A) 8.0

(B) 7.5

(C) 7.2

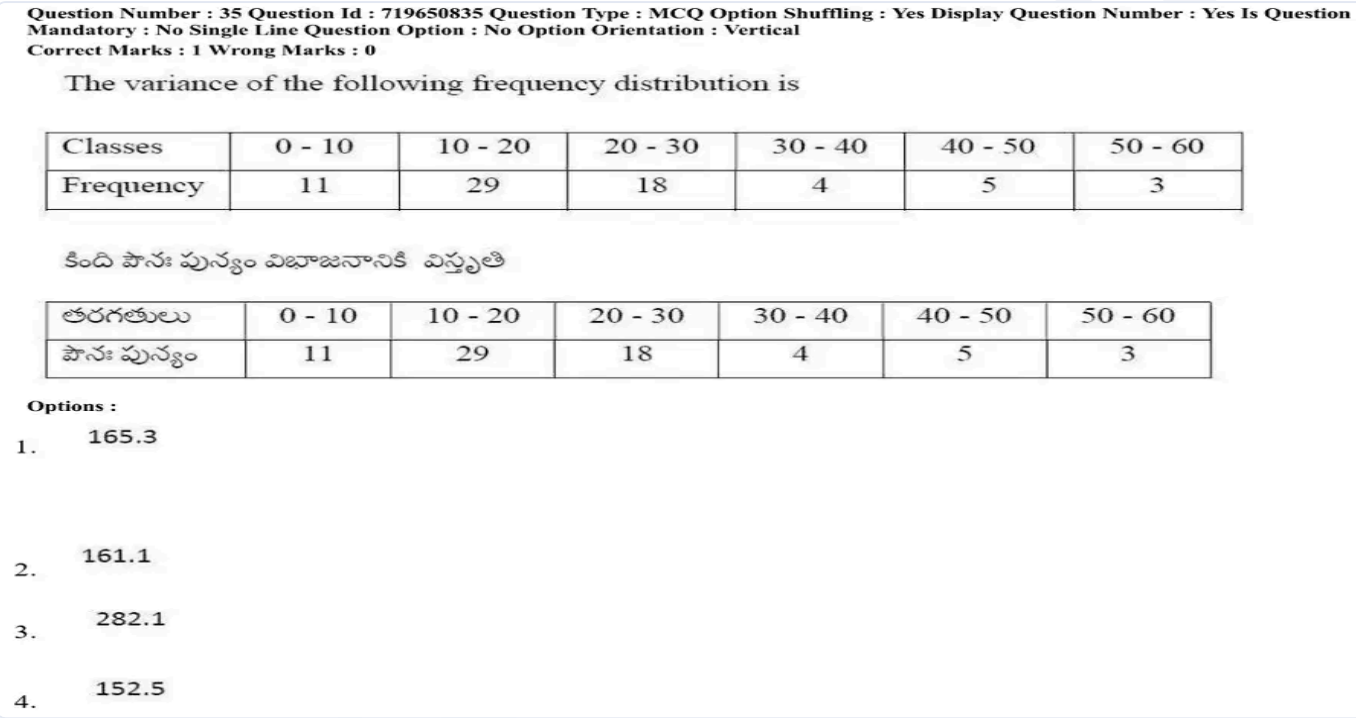
(D) 7.0

Answer: (B) 7.5 · Official TGCHE final key

Q122 TS EAMCET 2020 · 11 Sep · Shift 1 MCQ

The variance of the following frequency distribution is

(see the figure above)



Question Number : 35 Question Id : 719650835 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The variance of the following frequency distribution is

Classes	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
Frequency	11	29	18	4	5	3

కింది పౌనఃపున్యం విభాజనానికి విస్తృతి

తరగతులు	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
పౌనఃపున్యం	11	29	18	4	5	3

Options :

1. 165.3

2. 161.1

3. 282.1

4. 152.5

(A) 165.3

(B) 161.1

(C) 282.1

(D) 152.5

Answer: (B) 161.1 · Official TGCHE final key

Q123 TS EAMCET 2020 · 11 Sep · Shift 1 MCQ

The mean deviation about the mean of the following data is nearly

(see the figure above)

Question Number : 36 Question Id : 719650836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The mean deviation about the mean of the following data is nearly

Size(x)	1	3	5	7	9	11	13	15
Frequency(f)	3	3	4	14	7	4	3	4

ఈ క్రింది దత్తాంశం యొక్క మధ్యమం నుంచి మధ్యమ విచలనము సుమారుగా

సైజు (x)	1	3	5	7	9	11	13	15
పౌనఃపున్యం (f)	3	3	4	14	7	4	3	4

Options :

1. 3.45
2. 3.25
3. 2.75
4. 2.95

(A) 3.45
(B) 3.25
(C) 2.75
(D) 2.95

Answer: (D) 2.95 · Official TGCHE final key

Q124 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

If S_1 and S_2 are the variances of the first $2k$ and k $(k > 1)$ natural numbers respectively, then (S_1/S_2) lies in the interval

(A) $[4, \infty)$
(B) $(1, 4]$
(C) $(4, 5]$
(D) $[7, \infty)$

Answer: (C) $(4, 5]$ · Official TGCHE final key

Q125 TS EAMCET 2020 · 11 Sep · Shift 2 MCQ

The standard deviations of two sets of observations $X = \{x_i\}$ and $Y = \{y_i\}$ $(i = 1, 2, \ldots\ldots 100)$ are respectively 5 and 6. If $\bar{x}, \bar{y}$ are their means and $\sum_{i=1}^{100}(x_i - \bar{x})(y_i - \bar{y}) = 600$, then the standard deviation of $Z = \{z_i / z_i = x_i - y_i\}$ is

(A) 12
(B) 6
(C) 7
(D) 10

Answer: (C) 7 · Official TGCHE final key

Q126 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

For the following frequency distribution, the variance is approximately equal to
Class Interval: 0 - 5 | 5 - 10 | 10 - 15 | 15 - 20 | 20 - 25
Frequency: 4 | 1 | 10 | 3 | 2

(A) 33.1
(B) 30.55
(C) 34.75
(D) 37.50

Answer: (C) 34.75 · Official TGCHE final key

Q127 TS EAMCET 2020 · 10 Sep · Shift 1 MCQ

If the mean of the discrete distribution 8, 9, 6, 5, x, 4, 6, 5 is 6, then its standard deviation (nearest to two decimal places) is

(A) 2.50
(B) 1.58
(C) 0.51
(D) 1.41

Answer: (B) 1.58 · Official TGCHE final key

Q128 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

Assertion (A): Variance of $4x_1, 4x_2, \ldots\ldots\ldots 4x_n$ is 16 times the variance of $x_1, x_2, x_3, \ldots\ldots\ldots x_n$
Reason (R): If $y = ax + b$, then variance of y is a (variance of x) $+b$
The correct option among the following is

(A) (A) is true, (R) is true and (R) is the correct explanation for (A)
(B) (A) is true, (R) is true but (R) is not the correct explanation for (A)
(C) (A) is true but (R) is false
(D) (A) is false but (R) is true

Answer: (C) (A) is true but (R) is false · Official TGCHE final key

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Q129 TS EAMCET 2020 · 10 Sep · Shift 2 MCQ

If α, β are respectively the mean deviation about the mean and variance of the first five prime numbers, then the ordered pair $(\alpha, \beta) =$

(A) $(2.27, 10.42)$
(B) $(2.27, 10.24)$
(C) $(2.72, 10.24)$
(D) $(2.72, 10.42)$

Answer: (C) $(2.72, 10.24)$ · Official TGCHE final key

Q130 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

The mean deviation about the mean for the following data is
Class Interval: 0 - 4 | 4 - 8 | 8-12 | 12-16
Frequency: 4 | 3 | 2 | 1

(A) 6
(B) 3.6
(C) 3.2
(D) 10

Answer: (C) 3.2 · Official TGCHE final key

Q131 TS EAMCET 2020 · 9 Sep · Shift 1 MCQ

The means of two groups of observations A and B are $\bar{x}, \bar{y}$ respectively and their standard deviations are respectively 2 and 3. In order that the group A is to be more consistent than the group B $\frac{\bar{y}}{\bar{x}} >$

(A) $\frac{3}{2}$
(B) $\frac{5}{1}$
(C) $\frac{2}{3}$
(D) $\frac{6}{5}$

Any attempt was accepted. Full marks for attempting. · Official TGCHE final key

Q132 TS EAMCET 2020 · 9 Sep · Shift 2 MCQ

The mean deviation from the arithmetic mean of the discrete data $2, 7, 5, 6, 4, 3, 11, 17, 8$ is

(A) $\frac{17}{2}$
(B) $\frac{10}{3}$
(C) $\frac{37}{2}$
(D) 9

Answer: (B) $\frac{10}{3}$ · Official TGCHE final key

Q133 TS EAMCET 2020 · 9 Sep · Shift 2 MCQ

The variance of the following frequency distribution is
\begin{tabular}{l|c|c|c|c|c} Class Interval & 0 - 6 & 6 - 12 & 12 - 18 & 18 - 24 & 24 - 30 \\ Frequency & 10 & 8 & 6 & 4 & 2 \end{tabular}

(A) 56
(B) 30
(C) 11
(D) 20

Answer: (A) 56 · Official TGCHE final key

Q134 TS EAMCET 2019 · 6 May · Shift 1 MCQ

If α, β, γ are the mean deviations about the mean, median and mode of the data 1, 2, 2, 3, 3, 3, 4, 6 respectively, then

(A) $\alpha < \beta < \gamma$
(B) $\alpha = \beta = \gamma$
(C) $\alpha \neq \beta = \gamma$
(D) $\beta < \alpha < \gamma$

Answer: (B) $\alpha = \beta = \gamma$ · Official TGCHE final key

Q135 TS EAMCET 2019 · 6 May · Shift 1 MCQ

The coefficient of variation for the following data is
(see the figure above)

Question Number : 36 Question Id : 7512364996 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The coefficient of variation for the following data is

క్రింది దత్తాంశానికి విచలన గుణకము

x_i	5	7	9	11
f_i	3	2	1	2

Options :

1. $9\frac{\sqrt{23}}{2}$
2. $20\frac{\sqrt{23}}{3}$
3. $15\frac{\sqrt{23}}{4}$
4. $7\frac{\sqrt{23}}{6}$

(A) $9\frac{\sqrt{23}}{2}$

(B) $20\frac{\sqrt{23}}{3}$

(C) $15\frac{\sqrt{23}}{4}$

(D) $7\frac{\sqrt{23}}{6}$

Answer: (B) $20\frac{\sqrt{23}}{3}$ · Official TGCHE final key

Q136 TS EAMCET 2019 · 4 May · Shift 1 MCQ

The mean deviation from the median of the data 16, 22, 3, 14, 5, 10, 8, 6, 11, 4 is

(A) 5

(B) 5.7

(C) 4.7

(D) 4

Answer: (C) 4.7 · Official TGCHE final key

Q137 TS EAMCET 2019 · 4 May · Shift 1 MCQ

The variance of the following frequency distribution is

Class Interval: 0-4 | 4-8 | 8-12 | 12-16 | 16-20

Frequency: 2 | 4 | 6 | 3 | 1

(A) $\frac{295}{16}$
(B) $\frac{304}{16}$
(C) $\frac{37}{4}$
(D) $\frac{97}{4}$

Answer: (A) $\frac{295}{16}$ · Official TGCHE final key

Q138 TS EAMCET 2019 · 4 May · Shift 2 MCQ

The mean deviation about the median of the following distribution is

x	6	12	18	24	30	36	42
f	4	7	9	18	15	10	5

(A) 7.5
(B) 8.4
(C) 9.2
(D) 9.6

Answer: (A) 7.5 · Official TGCHE final key

Q139 TS EAMCET 2019 · 4 May · Shift 2 MCQ

For a group of 100 observations, the arithmetic mean and standard deviation are 8 and $\sqrt{10.5}$ respectively. The mean and standard deviation of 50 items selected from these 100 observations are 10 and 2 respectively. Then the standard deviation of the remaining 50 observations is

(A) 2
(B) 3
(C) 3.5
(D) 4

Answer: (B) 3 · Official TGCHE final key

Q140 TS EAMCET 2019 · 3 May · Shift 1 MCQ

In a data with 15 number of observations $x_1, x_2, x_3, \ldots, x_{15}$, $\sum_{i=1}^{15} x_i^2 = 3600$ and $\sum_{i=1}^{15} x_i = 175$. If the value of one observation 20 was found wrong and was replaced by its correct value 40, then the corrected variance of that data is

(A) 151
(B) 149
(C) 145
(D) 144

Answer: (A) 151 · Official TGCHE final key

Q141 TS EAMCET 2019 · 3 May · Shift 1 MCQ

If the coefficient of variation and variance of a frequency distribution are 7.2 and 3.24 respectively, then its mean is

(A) 45
(B) 25
(C) 20
(D) 16

Answer: (B) 25 · Official TGCHE final key

Q142 TS EAMCET 2019 · 3 May · Shift 2 MCQ

The variance of the data 2, 3, 5, 11, 13, 17, 19 is nearly

(A) 6.258
(B) 24.25
(C) 4.95
(D) 39.71

Answer: (D) 39.71 · Official TGCHE final key

Q143 TS EAMCET 2019 · 3 May · Shift 2 MCQ

The approximate value of the mean deviation about the mean for the following data is

Class Interval	0 – 2	2 – 4	4 – 6	6 – 8	8 – 10
Frequency	1	2	3	2	1

(A) 3.56
(B) 4.61
(C) 2.19
(D) 1.78

Answer: (D) 1.78 · Official TGCHE final key

Q144 AP EAMCET 2019 · 23 Apr · Shift 1 MCQ

The variance of the following data is
x_i: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
f_i: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

(A) 10
(B) 9
(C) 8
(D) 6

Answer: (D) 6 · Official APSCHE final key

Q145 AP EAMCET 2019 · 23 Apr · Shift 1 MCQ

The coefficient of variation of the following distribution is
Class interval: 0-5, 5-10, 10-15, 15-20, 20-25
Frequency: 4, 1, 10, 3, 2

(A) $\frac{25\sqrt{139}}{12}$
(B) $\frac{25\sqrt{139}}{6}$
(C) $\frac{139}{6}$
(D) $\frac{25 \times 139}{12}$

Answer: (B) $\frac{25\sqrt{139}}{6}$ · Official APSCHE final key

Q146 AP EAMCET 2019 · 22 Apr · Shift 1 MCQ

The coefficient of variation of $9, 3, 11, 5, 7$ is

(A) $\frac{100\sqrt{2}}{7}$
(B) $\frac{200\sqrt{2}}{3}$
(C) $\frac{200\sqrt{2}}{7}$
(D) $\frac{100\sqrt{2}}{3}$

Answer: (C) $\frac{200\sqrt{2}}{7}$ · Official APSCHE final key

Q147 AP EAMCET 2019 · 22 Apr · Shift 1 MCQ

The mean deviation about the mean for the following data
Marks obtained : 0-10, 10-20, 20-30, 30-40, 40-50
No. of Boys : 6, 8, 10, 4, 2
is

(A) 9.33
(B) 5.6
(C) 8.33
(D) 9.6

Answer: (D) 9.6 · Official APSCHE final key

Q148 AP EAMCET 2019 · 22 Apr · Shift 2 MCQ

The mean deviation of the data 3, 5, 11, 13, 17, 19, 23, 29 about its arithmetic mean is

(A) 8.5
(B) 8
(C) 7.2
(D) 7

Answer: (D) 7 · Official APSCHE final key

Q149 AP EAMCET 2019 · 22 Apr · Shift 2 MCQ

If the weights of 10 persons (in kgs) are observed as : 45, 49, 55, 50, 41, 44, 60, 58, 53, 55 then, the variance of their weights is

(A) 51
(B) 42.8
(C) 39.4
(D) 35.6

Answer: (D) 35.6 · Official APSCHE final key

Q150 AP EAMCET 2019 · 21 Apr · Shift 1 MCQ

For a data consisting of 15 observations x_i, $i = 1, 2, 3, \ldots, 15$ the following results are obtained: $\sum_{i=1}^{15} x_i = 170$; $\sum_{i=1}^{15} x_i^2 = 2830$. If one of the observation namely 20 was found wrong and was replaced by its correct value 30, then the corrected variance is

(A) 80
(B) 78
(C) 76
(D) 75

Answer: (B) 78 · Official APSCHE final key

Q151 AP EAMCET 2019 · 21 Apr · Shift 1 MCQ

The mean deviation about the mean for the following data is
Class interval: 0-10, 10-20, 20-30, 30-40, 40-50, 50-60, 60-70
Frequency: 4, 6, 16, 28, 16, 6, 4

(A) 35
(B) 10
(C) 15
(D) 12

Answer: (B) 10 · Official APSCHE final key

Q152 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

The standard deviations of x_i $(i = 1, 2, \ldots .10)$ and y_i $(i = 1, \ldots 10)$ are respectively 'a' and 'b'. $\bar{x}, \bar{y}$ are the means of these two sets of observations respectively. If $z_i = (x_i - \bar{x})(y_i - \bar{y})$ and $\sum_{i=1}^{10} z_i = c$, then the standard deviation of the observations $(x_i - y_i)$, $(i = 1, 2, \ldots .10)$ is

(A) $\sqrt{a^2 + b^2 + \frac{c}{5}}$

(B) $\sqrt{a^2 + b^2 - \frac{c}{5}}$

(C) $\sqrt{a^2 + b^2 - \frac{c^2}{5}}$

(D) $\sqrt{a^2 + b^2 + \frac{c^2}{5}}$

Answer: (B) $\sqrt{a^2 + b^2 - \frac{c}{5}}$ · Official APSCHE final key

Q153 AP EAMCET 2019 · 21 Apr · Shift 2 MCQ

For a group of 100 students, the mean $\bar{x}_1$ and the standard deviation σ_1 of their marks were found to be 40 and 15 respectively. Later it was observed that the scores 40 and 50 were misread as 30 and 60 respectively. If the mean and the standard deviation with the corrected observations of the scores, are $\bar{x}_2$ and σ_2 respectively, then

(A) $\bar{x}_1 = \bar{x}_2; \sigma_1 = \sigma_2$

(B) $\bar{x}_1 = \bar{x}_2; \sigma_1 < \sigma_2$

(C) $\bar{x}_1 = \bar{x}_2; \sigma_1 > \sigma_2$

(D) $\bar{x}_1 > \bar{x}_2; \sigma_1 = \sigma_2$

Answer: (C) $\bar{x}_1 = \bar{x}_2; \sigma_1 > \sigma_2$ · Official APSCHE final key

Q154 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

If $a_0, a_1, \ldots \ldots, a_{11}$ are in an arithmetic progression with common difference d, then their mean deviation from their arithmetic mean is

(A) $\frac{30}{11}|d|$

(B) $2|d|$

(C) $3|d|$

(D) $12|d|$

Answer: (C) $3|d|$ · Official APSCHE final key

Q155 AP EAMCET 2019 · 20 Apr · Shift 1 MCQ

The variance of the following continuous frequency distribution is
Class Interval: 0-10, 10-20, 20-30, 30-40
Frequency: 2, 3, 4, 1

(A) 201
(B) 62
(C) 19
(D) 84

Answer: (D) 84 · Official APSCHE final key

Q156 AP EAMCET 2019 · 20 Apr · Shift 2 MCQ

The variance of the observations 2, 3, 5, 7, 11, 13, 17, 22 is

(A) 43.75
(B) 48.25
(C) 80
(D) 350

Answer: (A) 43.75 · Official APSCHE final key

Q157 AP EAMCET 2019 · 20 Apr · Shift 2 MCQ

The coefficient of variation and standard deviation of an ungrouped data are 60 and 21 respectively. If 15 is added to every observation of the data, then the coefficient of variation of the new data is

(A) 30
(B) 42
(C) 40
(D) 20

Answer: (B) 42 · Official APSCHE final key

Q158 TS EAMCET 2018 · 7 May · Shift 1 MCQ

Let σ_1, σ_2 be the standard deviations of two distributions D_1 and D_2 respectively and D_1 be more consistent than D_2. If the means of D_1 and D_2 are same, then the percentage increase in the standard deviation of D_2 over the standard deviation of D_1 is

(A) $\frac{\sigma_1 - \sigma_2}{\sigma_2} \times 100$
(B) $\frac{\sigma_1 - \sigma_2}{\sigma_1} \times 100$
(C) $\frac{\sigma_2 - \sigma_1}{\sigma_2} \times 100$
(D) $\frac{\sigma_2 - \sigma_1}{\sigma_1} \times 100$

Answer: (D) $\frac{\sigma_2 - \sigma_1}{\sigma_1} \times 100$ · The council's preliminary key

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Q159 TS EAMCET 2018 · 7 May · Shift 1 MCQ

Consider the following distribution
x_i: 2, 4, 6, 8, 10
f_i: 1, 2, 3, 2, 1
The sum of the mean deviation from the mean and the mean deviation from the median of this distribution is

(A) 6
(B) $\frac{16}{9}$
(C) 54
(D) $\frac{32}{9}$

Answer: (D) $\frac{32}{9}$ · The council's preliminary key

Q160 TS EAMCET 2018 · 5 May · Shift 1 MCQ

The mean and standard deviation of a distribution of weights of a group of 20 boys are 40kgs and 5kgs respectively. If two boys of weights 43kg and 37kg are excluded from this group, then the variance of the distribution of weights of the remaining group of boys is

(A) 26.18
(B) 5.27
(C) 26.78
(D) 5.17

Answer: (C) 26.78 · The council's preliminary key

Q161 TS EAMCET 2018 · 5 May · Shift 1 MCQ

Consider the following data.
Group I: Number of observations 50, Mean 113, Standard deviation 6
Group II: Number of observations 60, Mean 120, Standard deviation 8
Group III: Number of observations 90, Mean 115, Standard deviation 7
With respect to the consistencies of the above groups, the increasing order of them is

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(A) I, III, II
(B) II, I, III
(C) III, II, I
(D) I, II, III

Answer: (A) I, III, II · The council's preliminary key

Q162 TS EAMCET 2018 · 5 May · Shift 2 MCQ

The mean deviation about the mean for the following data is
x_i: 2, 4, 5, 7, 9
f_i: 2, 4, 10, 8, 6

(A) 6.3
(B) 1.5
(C) 2.83
(D) 1.733

Answer: (D) 1.733 · The council's preliminary key

Q163 TS EAMCET 2018 · 5 May · Shift 2 MCQ

If the coefficients of variation of two distributions are 40 and 20 and their variances are 144 and 64 respectively, then the mean of their arithmetic means is

(A) 40
(B) 12
(C) 30
(D) 35

Answer: (D) 35 · The council's preliminary key

Q164 TS EAMCET 2018 · 4 May · Shift 1 MCQ

$x_1, x_2, \ldots, x_n$ are n observations with mean $\bar{x}$ and standard deviation σ
Match the items of List-I with those of List-II
List-I
a) $\sum_{i=1}^{n}(x_i - \bar{x})$
b) Variance (σ^2)
c) Mean deviation
d) Measure used to find the homogeneity of given two series
List-II
i) Median
ii) Coefficient of variation
iii) Zero
iv) Mean of the absolute deviations from[] any measure of central tendency

v) Mean of the squares of the deviations[] from mean

The correct answer is

(A) a-i, b-v, c-ii, d-iii

(B) a-i, b-iv, c-iii, d-ii

(C) a-iii, b-v, c-iv, d-ii

(D) a-iii, b-v, c-ii, d-i

Answer: (C) a-iii, b-v, c-iv, d-ii · The council's preliminary key

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Q165 TS EAMCET 2018 · 4 May · Shift 1 MCQ

The variance of 50 observations is 7. If each observation is multiplied by 6 and then 5 i[s] subtracted from it, then the variance of the new data is

(A) 37

(B) 42

(C) 247

(D) 252

Answer: (D) 252 · The council's preliminary key

Q166 TS EAMCET 2018 · 4 May · Shift 2 MCQ

The coefficient of variation of the first n natural numbers is

(A) $\frac{100}{\sqrt{3}}(n-1)$

(B) $\frac{100}{\sqrt{3}}\sqrt{\frac{n+1}{n-1}}$

(C) $\frac{\sqrt{3}}{100}\sqrt{\frac{n+1}{n-1}}$

(D) $\frac{100}{\sqrt{3}}\sqrt{\frac{n-1}{n+1}}$

Answer: (D) $\frac{100}{\sqrt{3}}\sqrt{\frac{n-1}{n+1}}$ · The council's preliminary key

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Q167 TS EAMCET 2018 · 4 May · Shift 2 MCQ

Two distributions A and B have the same mean. If their coefficients of variation are 6 and 2 respectively and σ_A, σ_B are their standard deviations, then

(A) $\sigma_A = 3\sigma_B$

(B) $3\sigma_A = \sigma_B$

(C) $\sigma_A = 2\sigma_B$

(D) $2\sigma_A = \sigma_B$

Answer: (A) $\sigma_A = 3\sigma_B$ · The council's preliminary key

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Q168 AP EAMCET 2018 · 24 Apr · Shift 1 MCQ

If the variance of 6, 7, 8, 9, 10, 11 is σ^2, then the variance of 112, 114, 116, 118, 120, 122 is

(A) $2\sigma^2$
(B) $4\sigma^2$
(C) $100 + 2\sigma^2$
(D) $100 + 4\sigma^2$

Answer: (B) $4\sigma^2$ · The council's preliminary key

Q169 AP EAMCET 2018 · 24 Apr · Shift 1 MCQ

Consider the frequency distribution
C.I.: 75-175, 175-275, 275-375, 375-475, 475-575, 575-675, 675-775
f_i: 3, 2, 1, 0, 1, 2, 3
If the variance of this distribution is 60000, then the coefficient of variation of the distribution is

(A) 60
(B) $\frac{400\sqrt{6}}{17}$
(C) $\frac{400\sqrt{6}}{9}$
(D) 595.75

Answer: (B) $\frac{400\sqrt{6}}{17}$ · The council's preliminary key

Q170 AP EAMCET 2018 · 24 Apr · Shift 2 MCQ

The mean of five observations is 4 and their variance is also 4. If three of the five observations are 1, 3, 4 then the product of the other two is

(A) 32
(B) 36
(C) 35
(D) 27

Answer: (C) 35 · The council's preliminary key

Q171 AP EAMCET 2018 · 24 Apr · Shift 2 MCQ

The mean deviation of the following data about its mean is

x_i	5	15	25	35	45
f_i	8	48	56	32	16

(A) 25
(B) 12
(C) 8
(D) 16

Answer: (C) 8 · The council's preliminary key

Q172 AP EAMCET 2018 · 23 Apr · Shift 1 MCQ

The standard deviation of the numbers 22, 26, 28, 20, 24, 30 is

(A) 2
(B) 2.4
(C) 3.24
(D) 3.42

Answer: (D) 3.42 · The council's preliminary key

Q173 AP EAMCET 2018 · 23 Apr · Shift 1 MCQ

The marks obtained by students A and B in 3 examinations are given below
(see the figure above)
The ratio of the coefficient of variation of marks of A and the coefficient of variation of marks of B is

Question Number : 36 Question Id : 4557344036 Question Type : MCQ Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The marks obtained by students A and B in 3 examinations are given below

Marks of A	30	20	40
Marks of B	70	0	5

A, B అను విద్యార్థులకు 3 పరీక్షలలో వచ్చిన మార్కులు క్రింది విధంగా ఉన్నాయి.

A యొక్క మార్కులు	30	20	40
B యొక్క మార్కులు	70	0	5

The ratio of the coefficient of variation of marks of A and the coefficient of variation of marks of B is

A యొక్క మార్కుల విచలనాంకమునకు మరియు, B యొక్క మార్కుల విచలనాంకమునకుగల నిష్పత్తి

Options :
1. 3 : 1
2. $5 : 8\sqrt{3}$
3. 1 : 3
4. $5 : 3\sqrt{61}$

(A) $3 : 1$
(B) $5 : 8\sqrt{3}$
(C) $1 : 3$
(D) $5 : 3\sqrt{61}$

Answer: (D) $5 : 3\sqrt{61}$ · The council's preliminary key

Q174 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

The standard deviation of the scores 505, 510, 515, 520, ..., 595 is

(A) $500 + 5\sqrt{30}$
(B) $505 + \sqrt{30}$
(C) $5\sqrt{30}$
(D) $5 + \sqrt{30}$

Answer: (C) $5\sqrt{30}$ · The council's preliminary key

Q175 AP EAMCET 2018 · 23 Apr · Shift 2 MCQ

If the variance of the distribution
x_i: 4, 8, 11, 17, 20, 24, 32
f_i: 3, 5, 9, 5, 4, 3, 1
is 45.8, then the variance of the distribution
y_i: 10, 18, 24, 36, 42, 50, 66
f_i: 3, 5, 9, 5, 4, 3, 1
is

(A) 93.6
(B) $\sqrt{93.9}$
(C) 183.2
(D) $\sqrt{183.2}$

Answer: (C) 183.2 · The council's preliminary key

Q176 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

The mean and the standard deviation of a data of 8 items are 25 and 5 respectively. If two items 15 and 25 are added to this data, then the variance of the new data is

(A) 29
(B) 24
(C) 26
(D) $\sqrt{29}$

Answer: (A) 29 · The council's preliminary key

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Q177 AP EAMCET 2018 · 22 Apr · Shift 1 MCQ

The mean deviation from the median for the following distribution (corrected to two decimals) is

x_i	6	9	3	12	15	13	21	22
f_i	4	5	3	2	5	4	4	3

(A) 13.42
(B) 5.45
(C) 4.97
(D) 11.25

Answer: (C) 4.97 · The council's preliminary key

Q178 AP EAMCET 2018 · 22 Apr · Shift 2 MCQ

The arithmetic mean and standard deviation of a data of nine numbers are 13 and 5 respectively. If 3 is included as the 10th item of the data, then the variance of the data of ten numbers is

(A) 23.5
(B) 21.5
(C) 31.5
(D) 27

Answer: (C) 31.5 · The council's preliminary key

Q179 AP EAMCET 2018 · 22 Apr · Shift 2 MCQ

The variance of the following distribution is
Marks: 1-3, 3-5, 5-7, 7-9
Number of students: 40, 30, 20, 10

(A) 2
(B) 4
(C) 6
(D) 8

Answer: (B) 4 · The council's preliminary key

Q180 TS EAMCET 2017 · 12 May · Offline MCQ

The mean deviation from the mean 10 of the data 6, 7, 10, 12, 13, α, 12, 16 is

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(A) 3.5
(B) 3.25
(C) 3
(D) 3.75

Answer: (B) 3.25 · The council's preliminary key

Q181 TS EAMCET 2017 · 12 May · Offline MCQ

If A and B are the variances of the 1st 'n' even numbers and 1st 'n' odd numbers respectively then

(A) $A = B$
(B) $A > B$
(C) $A < B$
(D) $A = B + 1$

Answer: (A) $A = B$ · The council's preliminary key

Q182 AP EAMCET 2017 · 26 Apr · Shift 1 MCQ

The variance of the following data is

x_i	6	10	14	18	24	28	30
f_i	2	4	7	12	8	4	3

(A) 43.4
(B) 34.3
(C) 44.3
(D) 33.4

Answer: (A) 43.4 · The council's preliminary key

Q183 AP EAMCET 2017 · 26 Apr · Shift 1 MCQ

If $\alpha \neq 0$ and the mean deviation of the observations $\{k\alpha\}$, for $k = 1, 2, \ldots, 50$ about its median is 50, then $|\alpha| =$

(A) 2
(B) 3
(C) 4
(D) 5

Answer: (C) 4 · The council's preliminary key

Q184 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

Consider the following data:
Daily wage (Rs.): 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90

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No. of workers: 17 | 28 | 21 | 15 | 13 | 6

The coefficient of variation of the above distribution of wages, if its standard deviation is 14.72, is

(A) 14.73
(B) 23.73
(C) 26.91
(D) 20.82

Answer: (C) 26.91 · The council's preliminary key

Q185 AP EAMCET 2017 · 26 Apr · Shift 2 MCQ

The mean deviation about the median of the numbers 2, 3, 5, 20, 17, 15, 13, 11, 9, 7 is

(A) 10
(B) 4.8
(C) 5.4
(D) 5

Answer: (D) 5 · The council's preliminary key

Q186 AP EAMCET 2017 · 25 Apr · Shift 1 MCQ

The variance of the first ten multiples of 3 is

(A) 64.25
(B) 54.25
(C) 70.75
(D) 74.25

Answer: (D) 74.25 · The council's preliminary key

Q187 AP EAMCET 2017 · 25 Apr · Shift 1 MCQ

If the mean deviation from the mean of the observations $\{1 + K\alpha\}$, where $K = 0, 1, 2, ..., 100$ and $\alpha > 0$ is 255 then $\alpha =$

(A) 10
(B) 10.1
(C) 25
(D) 25.5

Answer: (B) 10.1 · The council's preliminary key

Q188 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

The mean of numbers $a, b, 8, 5, 10$ is 6 and their variance is 6.80. Then $\text{Tan}^{-1}\frac{1}{a} + \text{Tan}^{-1}\frac{1}{b} =$

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(A) $\mathrm{Tan}^{-1}\frac{7}{12}$

(B) $\mathrm{Tan}^{-1}\left(-\frac{7}{11}\right)$

(C) $\mathrm{Tan}^{-1}\frac{11}{7}$

(D) $\mathrm{Tan}^{-1}\frac{7}{11}$

Answer: (D) $\mathrm{Tan}^{-1}\frac{7}{11}$ · The council's preliminary key

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Q189 AP EAMCET 2017 · 25 Apr · Shift 2 MCQ

If the coefficients of variation of two distributions are 60 and 70 and their standard deviations are 21 and 16 respectively, then their arithmetic means are respectively

(A) 35, 22.85

(B) 32, 25.85

(C) 35, 28.25

(D) 35, 25.25

Answer: (A) 35, 22.85 · The council's preliminary key

Q190 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

Let a and b be two real numbers. If the arithmetic mean and the variance of $a, b, 8, 5$ and 10 are respectively 6 and 6.8 then an ordered pair $(a, b) =$

(A) $(3, 4)$

(B) $(1, 6)$

(C) $(7, 0)$

(D) $(-2, 9)$

Answer: (A) $(3, 4)$ · The council's preliminary key

Q191 AP EAMCET 2017 · 24 Apr · Shift 1 MCQ

The mean deviation from the mean of the data given below is

Marks: 10 15 20 25 30

Number of students: 2 4 6 8 5

(A) 5

(B) 5.12

(C) 5.25

(D) 5.6

Answer: (B) 5.12 · The council's preliminary key

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Q192 AP EAMCET 2017 · 24 Apr · Shift 2 MCQ

The standard deviation of the following distribution is

Class interval: 0-10, 10-20, 20-30, 30-40

Frequency: 1, 3, 4, 2

(A) 9

(B) 8

(C) 7

(D) 6

Answer: (A) 9 · The council's preliminary key

Q193 AP EAMCET 2017 · 24 Apr · Shift 2 MCQ

The mean deviation of the numbers $a, a+d, a+2d, \ldots, a+2nd$ from their mean is equal to

(A) $\dfrac{(n+1)d}{2n+1}$

(B) $\dfrac{n(n+1)d}{2n+1}$

(C) $\dfrac{(n+1)|d|}{2n}$

(D) $\dfrac{n(n+1)|d|}{2n+1}$

Answer: (D) $\dfrac{n(n+1)|d|}{2n+1}$ · The council's preliminary key

Q194 TS EAMCET 2016 · 15 May · Offline MCQ

The standard deviation of $a, a+d, a+2d, \ldots, a+2nd$ is

(A) nd

(B) n^2d

(C) $\sqrt{\frac{n(n+1)}{3}}\,d$

(D) $\sqrt{\frac{n(n+3)}{3}}\,d$

Answer: (C) $\sqrt{\frac{n(n+1)}{3}}\,d$ · Official TGCHE final key

Q195 AP EAMCET 2016 · 29 Apr · Offline MCQ

If the mean of 10 observations is 50 and the sum of the squares of the deviations of the observations from the mean is 250, then the coefficient of variation of those observations is

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(A) 25
(B) 50
(C) 10
(D) 5

Answer: (C) 10 · The council's preliminary key

Q196 AP EAMCET 2016 · 29 Apr · Offline MCQ

The variance of the first 50 even natural numbers is

(A) $\frac{833}{4}$
(B) 833
(C) 437
(D) $\frac{437}{4}$

Answer: (B) 833 · The council's preliminary key

Q197 AP EAMCET 2014 · 22 May · Offline MCQ

If $x_1, x_2, \ldots\ldots\ldots, x_n$ are n observations such that $\sum_{i=1}^{n} x_i^2 = 400$ and $\sum_{i=1}^{n} x_i = 80$ then the least value of n is

(A) 18
(B) 12
(C) 15
(D) 16

Answer: (D) 16 · The council's preliminary key

Q198 AP EAMCET 2014 · 22 May · Offline MCQ

The mean of four observations is 3. If the sum of the squares of these observations is 48 then their standard deviation is

(A) $\sqrt{7}$
(B) $\sqrt{2}$
(C) $\sqrt{3}$
(D) $\sqrt{5}$

Answer: (C) $\sqrt{3}$ · The council's preliminary key

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