

KLUEE 2023 Question Paper for Mathematics

Number of Sections	3 (Mathematics, Physics, and Chemistry)
Total Number of Questions	75 Mathematics – 25 out of 25 Questions Physics – 25 out of 25 Questions Chemistry – 25 out of 25 Questions
Duration	3 Hours
Type of Questions	Multiple Choice Questions
Weightage	- All Questions carry equal marks - No negative marks

- Each section contains 25 Questions. There is no choice and no negative marks.

Mathematics

Answer All Questions

Q1. A man is walking on a straight line. The arithmetic mean of the reciprocals of the intercepts of this line on the coordinate axes is $1/4$. Three stones A, B and C are placed at the points $(1,1)$, $(2,2)$, and $(4,4)$ respectively. Then which of these stones is/are on the path of the man?

- A. B only
- B. A only
- C. the three
- D. C only

Q2. Let $f : \mathbb{R} \rightarrow \mathbb{R}$ be defined as $f(x) = 2x - 1$ and $g : \mathbb{R} - \{1\} \rightarrow \mathbb{R}$ be defined as $g(x) = (x - \frac{1}{2}) / (x - 1)$.

Then the composition function $f(g(x))$ is:

- A. Both one-one and onto
- B. onto but not one-one
- C. Neither one-one nor onto
- D. one-one but not onto

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Q25. The function $f(x) = (4x^3 - 3x^2)/6 - 2\sin x + (2x - 1)\cos x$:

- A. increases in $[1/2, \infty)$
- B. decreases $(-\infty, 1/2]$
- C. increases in $(-\infty, 1/2]$
- D. decreases $[1/2, \infty)$