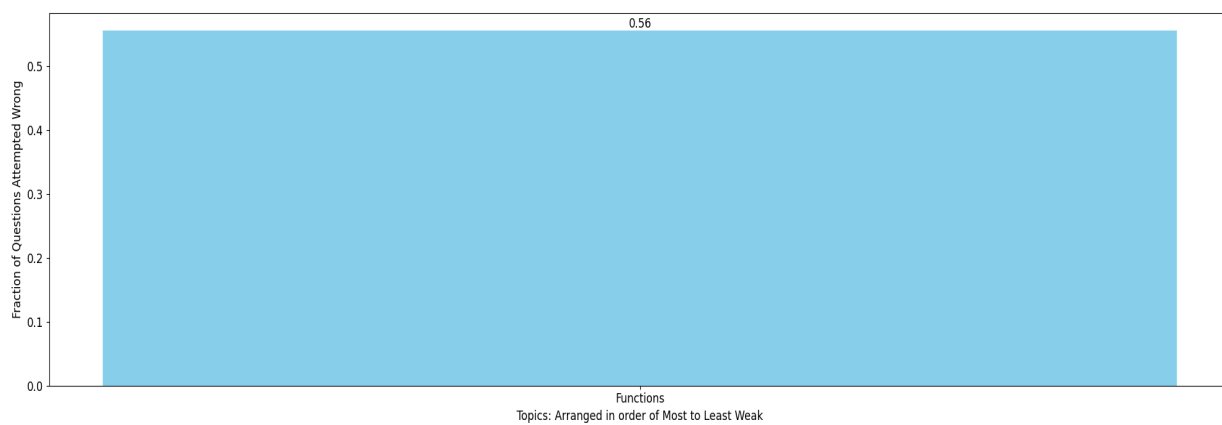


Md Amash Misbah Total MLAssist - Personalised DPP

Question Paper Analysis:



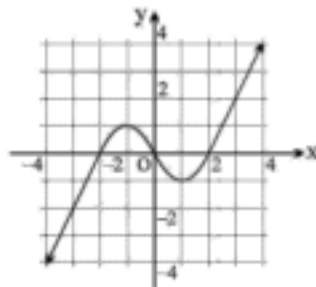
Weak Topic Analysis:



Practice Questions:

Functions:

9. The domain of the definition of the function $f(x) = \frac{x}{4-x^2} + \log_{10}(x^3 - x)$ is [JEE - Main 2019]
- (A) $(-1,0) \cup (1,2) \cup (3, \infty)$ (B) $(-2, -1) \cup (-1,0) \cup (2, \infty)$
(C) $(-1,0) \cup (1,2) \cup (2, \infty)$ (D) $(1,2) \cup (2, \infty)$
2. Find the domain & range of the following functions. (Read the symbols $[*]$ and $\{*\}$ as greatest integers and fractional part functions respectively.)
- (i) $y = \log_{\sqrt{3}}(\sqrt{2}(\sin x - \cos x) + 3)$
- (ii) $y = \frac{2x}{1+x^2}$
- (iii) $f(x) = \frac{x^2-3x+2}{x^2+x-6}$
- (iv) $f(x) = \frac{x}{1+|x|}$
- (v) $y = \sqrt{2-x} + \sqrt{1+x}$
- (vi) $f(x) = \frac{\sqrt{x+4}-3}{x-5}$
1. The graph of the function $y = g(x)$ is shown.
The number of solutions of the equation $||g(x)| - 1| = \frac{1}{2}$, is



- (A) 4 (B) 5 (C) 6 (D) 8

13. Let $f(x)$ be a function such that $f(x - 1) + f(x + 1) = \sqrt{3} f(x) \forall x \in \mathbb{R}$. If $f(5) = 100$, then $\sum_{r=0}^{49} f(5 + 12r)$
9. The set of real values of 'x' satisfying the equality $\left\lfloor \frac{3}{x} \right\rfloor + \left\lfloor \frac{4}{x} \right\rfloor = 5$ (where $\lfloor \cdot \rfloor$ denotes the greatest integer function) belongs to the interval $(a, b/c]$ where $a, b, c \in \mathbb{N}$ and b/c is in its lowest form. Find the value of $a + b + c + abc$.
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