

Prabhat Kumar College, Contai

Department of Mathematics

2nd Year Mathematics (General) Annual Pattern

Paper: 2

Time: 1 hours

Answer any one :-

1. Evaluate $\int_0^{\pi/2} \frac{\sin^2 x}{\sin x + \cos x} dx$.

2. Integrate the function $\frac{(\sqrt{x} + \sqrt[3]{x^2})^2}{x}$.

3. Find all asymptotes of $x^3 - 2x^2y + xy^2 + x^2 - xy + 2 = 0$