Question 12:- $\int \frac{\cos x}{(1-\sin x)(2-\sin x)}\, dx$

$\sin x = t$

$\cos x\, dx = dt$

$I = \int \frac{dt}{(1-t)(2-t)}$

$\Rightarrow \int \frac{1}{1-t} - \frac{1}{2-t}\, dt.$

$\log(1-t) - \log(2-t) + C$

$\log\left|\frac{2-t}{1-t}\right| + C$

$\log\left|\frac{2-\sin x}{1-\sin x}\right| + C$

Answer