King Fahd University of Petroleum and Minerals **MATH-302**

Quiz 6

ID:-Sec.:01 Name:-

(1) Evaluate the integral $\oint_C \frac{\sin z}{(2 z - 1)(z - 2)^2} dz$ along the the closed contour C, where C is |z - 1| = 3.

(2) Expand $f(z) = \frac{2}{z^2 - 4z + 3}$ as Laurent series valid for 0 < |z - 1| < 2.

King Fahd University of Petroleum and Minerals **MATH-302**

Quiz 6

Sec.:05 ID:-Name:-

(1) Evaluate the integral $\oint_C \frac{\cos z}{(z-1)(z-2)^2} dz$ along the the closed contour C, where C is |z-1|=3.

(2) Expand $f(z) = \frac{1}{z^3 - z^2}$ as Laurent series valid for 0 < |z - 1| < 1.