We have,

$\lim_{x \to 1}\left(\frac{x^7-2x^5+1}{x^3-3x^2+2}\right)$ = (1- 2+1) / (1 - 3 +2) = 0 / 0 --- (1)

From (1), we can use L-Hospital Rule,

$\lim_{x \to 1}\left(\frac{7x^6-10x^4}{3x^2-6x}\right)$ = (7 - 10) / (3 - 6) = (-3)/(-3) =3/3 =1

GATE NOTES,

L-Hospital Rule

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