$$F(x) = \int_0^x t f(t)\,dt$$

$$F(x^2) = \int_0^{x^2} t f(t)\,dt$$

$F(x^2) = x^4 - x^5$ (given)

$$2x \cdot F'(x^2) = 4x^3 - 5x^4 \quad -(1)$$

$$2x \cdot F'(x^2) = x^2 f(x^2) \times 2x \quad -(2)$$

from (1) & (2)

$$x^2 f(x^2) \times 2x = 4x^3 - 5x^4$$

$$f(x^2) = \frac{4x^3 - 5x^4}{2x^3} = 2 - \frac{5}{2}x$$

$$f(x) = 2 - \frac{5}{2}\sqrt{x}$$

Now to find critical point of $f(x)$

$$f'(x) = -\frac{5}{2} \times \frac{1}{2} \times x \frac{1}{\sqrt{x}} = 0$$

$$\Rightarrow x = \infty$$

$\Rightarrow$ No. of critical point = 0