

(6)

$$(23) \quad I = P/A = P/4\pi r^2$$

$$\Rightarrow r = \sqrt{\frac{P}{4\pi I}} = \sqrt{\frac{50 \cdot 10^3}{4\pi \cdot 10^{-6}}} \text{ m} = 63078 \text{ m} \approx \underline{63 \text{ km}}$$

(B)

$$(24) \quad \omega = a k^\alpha \Rightarrow v_f = \frac{\omega}{k} = a k^{\alpha-1} = a \left(\frac{2\pi}{\lambda}\right)^{\alpha-1} \\ = a' \lambda^{1-\alpha} \Rightarrow \text{ikke C}$$

$$v_g = \frac{d\omega}{dk} = \alpha a k^{\alpha-1} = \alpha \cdot v_f \Rightarrow A \text{ er riktig!}$$

$$v_g \neq v_f \text{ hvis } \alpha \neq 1 \Rightarrow B \text{ er feil}$$

(A)

$$v_g = a'' \lambda^{1-\alpha} \Rightarrow v_g \text{ \u00f8kter med \u00f8kende } \lambda \\ \text{hvis } \alpha > 0 \Rightarrow D \text{ er feil}$$

$$(25) \quad \omega = \sqrt{gk} \Rightarrow v_f = \frac{\omega}{k} = \sqrt{g/k} = \sqrt{g\lambda/2\pi}$$

$$\Rightarrow \text{St\u00f8rst } v_f \text{ for st\u00f8rst } \lambda$$

$$\Rightarrow \text{B\u00f8lger med st\u00f8rst } \lambda \text{ sl\u00e5r f\u00f8rst mot land}$$

(C)