

Quantum Operators

Which of the following describe a Hermitian operator?

I. $\int_{-\infty}^{\infty} f(x)^* (\hat{A} g(x)) dx = \int_{-\infty}^{\infty} (\hat{A} f(x))^* g(x) dx$

II. $\hat{A} \langle f | g \rangle = \langle f | g \rangle \hat{A}$

III. $\langle f | \hat{A} g \rangle = \langle \hat{A} f | g \rangle$

A) I only

B) II only

C) I and III only

D) II and III only

E) I, II, and III

(C)