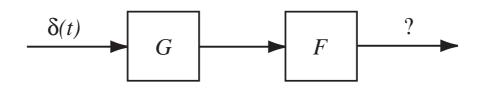
## **Cascaded Systems I**

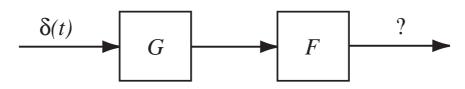
Consider a system that is itself a cascade of two systems. What is the impulse response of the system. That is, if the input to the system is an impulse, what is the output? Do not use the associative or commutative property of convolution.



- **1.** g(t) \* f(t)
- **2.** f(t) \* g(t)
- 3. Both answers are correct
- 4. Neither answer is correct
- 5. Don't know

# **Cascaded Systems I**

Consider a system that is itself a cascade of two systems. What is the impulse response of the system. That is, if the input to the system is an impulse, what is the output? Do not use the associative or commutative property of convolution.

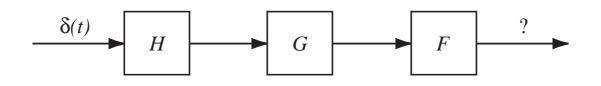


The correct answer is:

- **1.** g(t) \* f(t)
- **2.**  $\heartsuit f(t) * g(t)$
- 3. Both answers are correct
- 4. Neither answer is correct
- 5. Don't know

## **Cascaded Systems II**

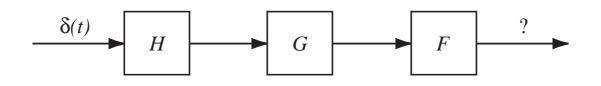
Consider a system that is itself a cascade of three systems. What is the impulse response of the system. That is, if the input to the system is an impulse, what is the output? Do not use the associative or commutative property of convolution.



- **1.** h(t) \* [g(t) \* f(t)]
- **2.** [h(t) \* g(t)] \* f(t)
- **3.** f(t) \* [g(t) \* h(t)]
- **4.** [f(t) \* g(t)] \* h(t)
- 5. More than one answer is correct
- 6. Don't know

## **Cascaded Systems II**

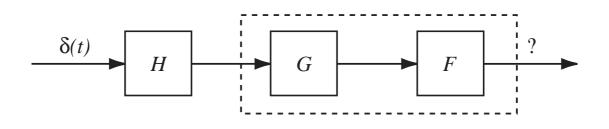
Consider a system that is itself a cascade of three systems. What is the impulse response of the system. That is, if the input to the system is an impulse, what is the output? Do not use the associative or commutative property of convolution.



- **1.** h(t) \* [g(t) \* f(t)]
- **2.** [h(t) \* g(t)] \* f(t)
- **3.**  $\heartsuit f(t) * [g(t) * h(t)]$
- **4.** [f(t) \* g(t)] \* h(t)
- 5. More than one answer is correct
- 6. Don't know

## **Cascaded Systems III**

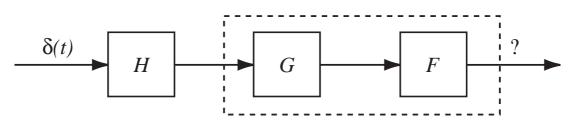
Consider a system that is itself a cascade of three systems. Treating the last two blocks together as a system, what is the impulse response of the entire system. *Do not use the associative or commutative property of convolution.* 



- **1.** h(t) \* [g(t) \* f(t)]
- **2.** [h(t) \* g(t)] \* f(t)
- **3.** f(t) \* [g(t) \* h(t)]
- **4.** [f(t) \* g(t)] \* h(t)
- 5. More than one answer is correct
- 6. Don't know

# **Cascaded Systems III**

Consider a system that is itself a cascade of three systems. Treating the last two blocks together as a system, what is the impulse response of the entire system. *Do not use the associative or commutative property of convolution.* 



The correct answer is:

- **1.** h(t) \* [g(t) \* f(t)]
- **2.** [h(t) \* g(t)] \* f(t)
- **3.** f(t) \* [g(t) \* h(t)]
- **4.**  $\heartsuit$  [f(t) \* g(t)] \* h(t)
- 5. More than one answer is correct
- 6. Don't know