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練習題



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Exam : C1000-112

Title : Fundamentals of Quantum
Computation Using Qiskit
v0.2X Developer

Version : DEMO

1. Which of the below statements plots how the qubits are connected in the ibmq_santiago system?

A)

```
from qiskit.visualization import plot_device_map
backend = provider.get_backend('ibmq_santiago')
plot_device_map(backend, plot_directed=True)
```

B)

```
from qiskit.visualization import plot_gate_map
backend = provider.get_backend('ibmq_santiago')
plot_gate_map(backend, plot_directed=True)
```

C)

```
from qiskit.visualization import plot_qubit_map
backend = provider.get_backend('ibmq_santiago')
plot_qubit_map(backend, plot_directed=True)
```

D)

```
from qiskit.visualization import plot_system_map
backend = provider.get_backend('ibmq_santiago')
plot_system_map(backend, plot_directed=True)
```

A. Option A

B. Option B

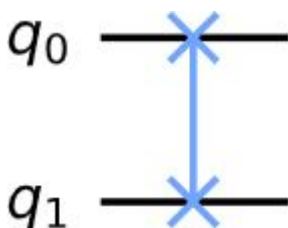
C. Option C

D. Option D

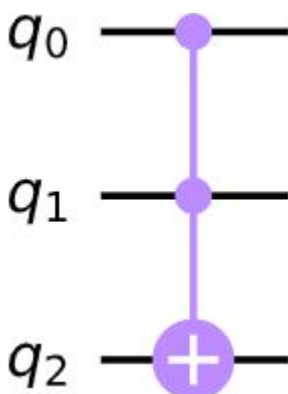
Answer: B

2. Which of the following multi qubit-gate represents the controlled-z gate?

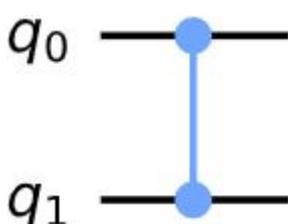
A)



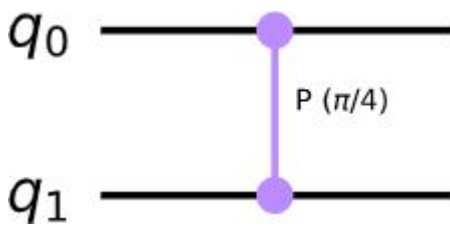
B)



C)



D)



- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

3.Which one of the below statements is invalid when drawing the quantum circuit?

- A. `qc.draw(output='mpl')`
- B. `qc.draw(output='text')`
- C. `qc.draw(output='latex')`
- D. `qc.draw(output='png')`

Answer: D

4.What fundamental property of classical information is distinctly different in quantum information?

- A. Deterministic encoding
- B. Limited storage capacity
- C. Non-locality and superposition
- D. Binary representation

Answer: C

5.What is the role of the Toffoli gate in a quantum circuit?

- A. Reverses the state of a qubit
- B. Acts as a controlled-controlled-NOT gate
- C. Implements a phase shift on qubits
- D. Creates entanglement between qubits

Answer: B