

Dashboard > Courses > School Of Engineering & Applied Sciences > B.Tech. > B.Tech. Cohort 2020-2024 > Semester-II Cohort 2020-24 > ECSE108L-Even2021 (Group - I & Group - II) > 19 June - 25 June > QUIZ 2

**Started on** Friday, 2 July 2021, 6:04 PM

**State** Finished

**Completed on** Friday, 2 July 2021, 6:19 PM

**Time taken** 15 mins 1 sec

**Marks** 14.00/15.00

**Grade** 9.33 out of 10.00 (93%)

### Question 1

Incorrect

Mark 0.00 out of  
1.00

What is the maximum possible range of bit-count specifically in n-bit binary counter consisting of 'n' number of flip-flops?

Select one:

- ☐ a. 0 to  $2^n - 1$
- ☐ b. 0 to  $2^n$
- ☒ c. 0 to  $2^n + 1$  ✗
- ☐ d. 0 to  $2^{n+1/2}$

The correct answer is: 0 to  $2^n - 1$

### Question 2

Correct

Mark 1.00 out of  
1.00

Ring counters is

Select one:

- ☐ a. Asynchronous counters
- ☒ b. Synchronous counters ✓
- ☐ c. None of the given

The correct answer is: Synchronous counters

**Question 3**

Correct

Mark 1.00 out of

1.00

For 0-17 up counter, how many flip-flops are required?

Select one:

- ☒ a. 5 ✓
- ☐ b. 4
- ☐ c. 2
- ☐ d. 3

The correct answer is: 5

**Question 4**

Correct

Mark 2.00 out of

2.00

An X-Y flipflop, whose characteristic table is given below is to be implemented using J-K flipflop.

This can be done by making: -

X	Y	$Q_{n+1}$
0	0	1
0	1	$Q_n$
1	0	$Q_n'$
1	1	0

Select one:

- ☐ a.  $J=X, K=Y'$
- ☐ b.  $J=Y, K=X'$
- ☒ c.  $J=Y', K=X$  ✓
- ☐ d.  $J=X', K=Y$

The correct answer is:  $J=Y', K=X$

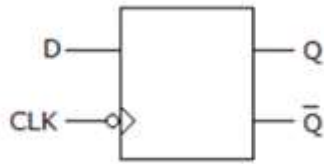
**Question 5**

Correct

Mark 2.00 out of

2.00

The symbols on this flip-flop device indicate \_\_\_\_\_.



Select one:

- ☐ a. Triggering can take place anytime during the LOW level of the CLK waveform
- ☐ b. Triggering can take place anytime during the HIGH level of the CLK waveform
- ☐ c. Triggering takes place on the positive edge of the CLK pulse.
- ☒ d. Triggering takes place on the negative edge of the CLK pulse. ✓

The correct answer is: Triggering takes place on the negative edge of the CLK pulse.

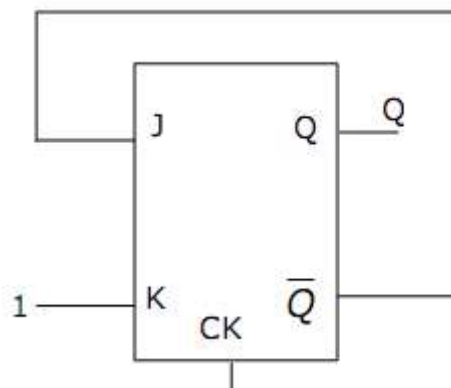
**Question 6**

Correct

Mark 4.00 out of

4.00

In JK flip flop if Qbar is connected as J input then in next 5 clock cycle what will be q output value. assume initially q=0 and Qbar = 1 ck is clock



Select one:

- ☒ a. 01010 ✓
- ☐ b. 00110
- ☐ c. 01111
- ☐ d. 11100

The correct answer is: 01010

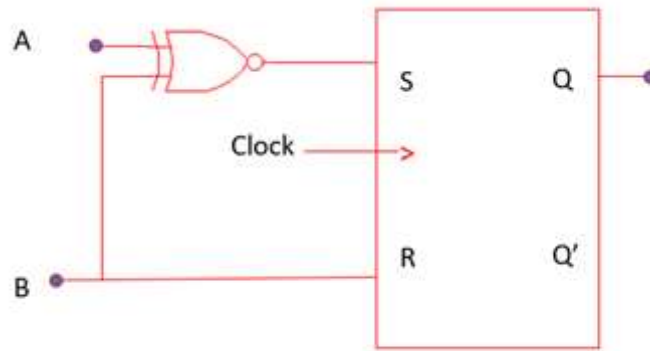
**Question 7**

Correct

Mark 4.00 out of

4.00

An AB Flip flop constructed from SR Flip flop as shown in the figure, the expression for next state  $Q'$  is



Select one:

- ☐ a.  $A'B' + A'Q$
- ☐ b.  $AB + AQ$
- ☒ c.  $A'B + AQ'$  ✓
- ☐ d.  $A'B + A'Q$

The correct answer is:  $A'B + AQ'$