

Date: \_\_\_\_\_

Name :- Daniyal

ID :- 17011

Program :- BS (CS)

Subject :- Digital logic  
design

Instructor :-

M. Amin



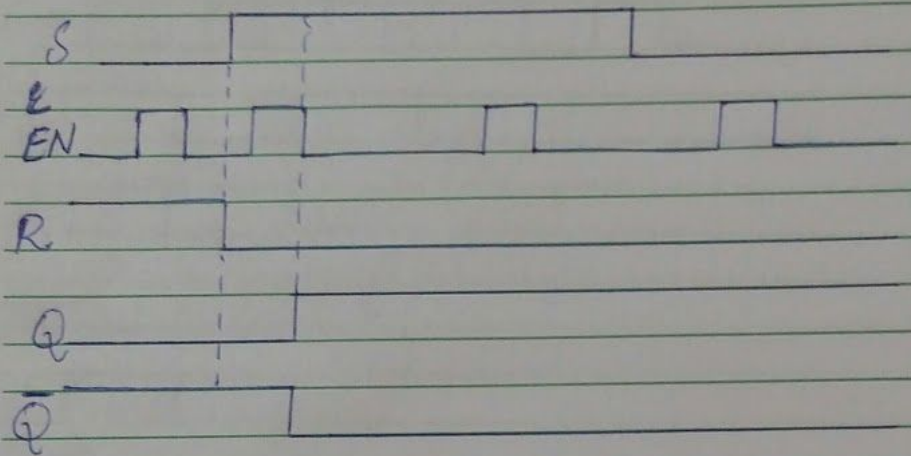


Date \_\_\_\_\_

2

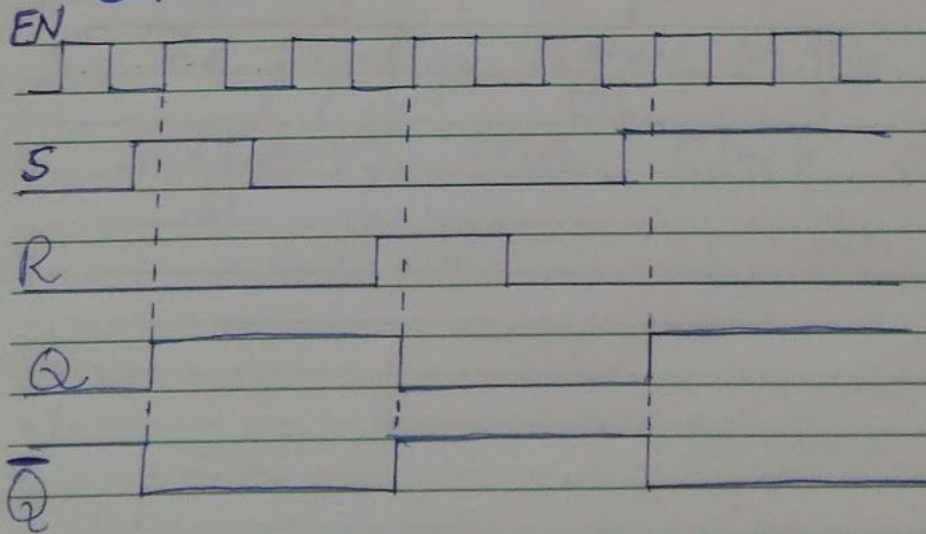
"Question no 3"

Answer:-



"Question no 4"

Answer:-

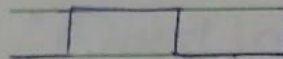
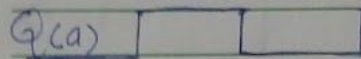
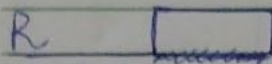
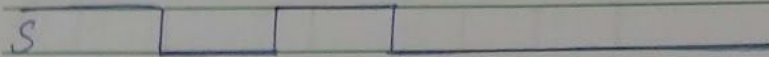
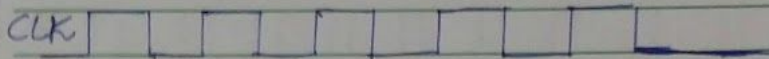


Date \_\_\_\_\_

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"Question no 5"

Answer:-



Q(b)

(a) The flip-flop triggered on the negative edge of the pulse

(b) The flip-flop triggers on the positive edge of the clock pulse

Answer

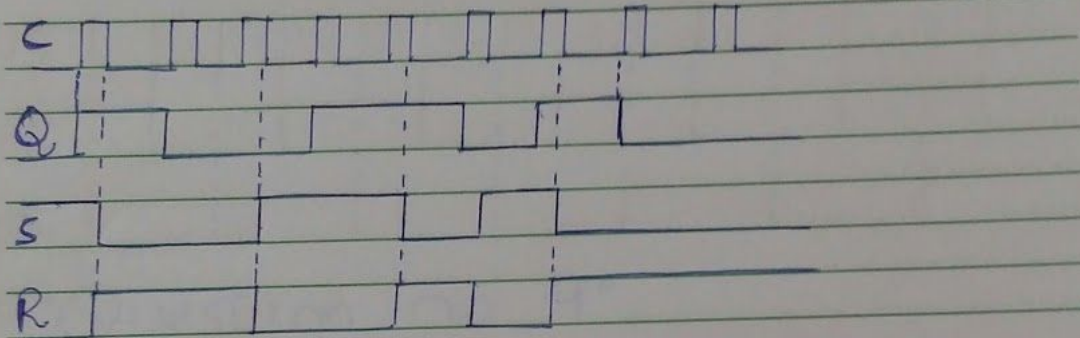


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4

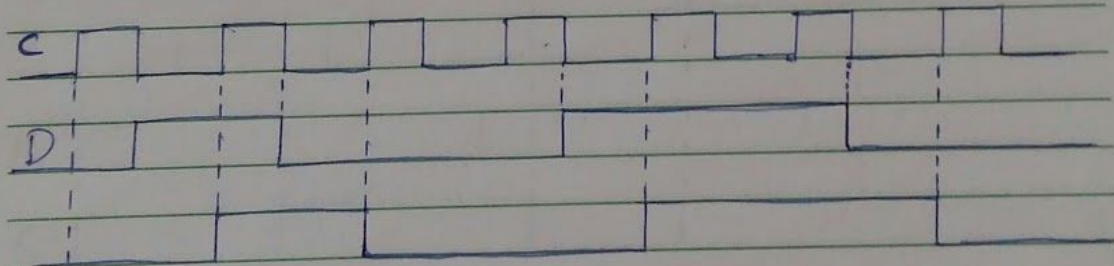
"Question no 6"

Answer:-



"Question no 7"

Answer:-

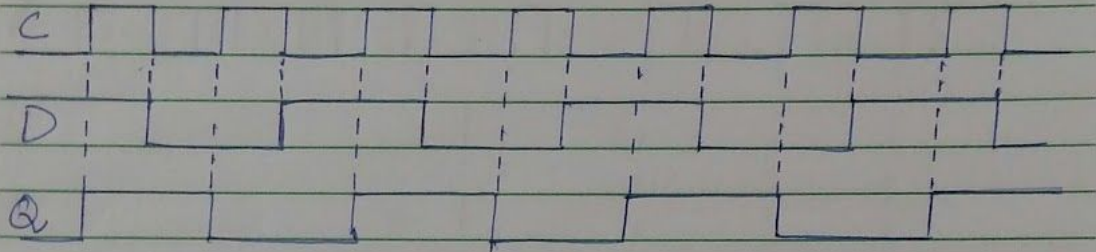


Date \_\_\_\_\_

5

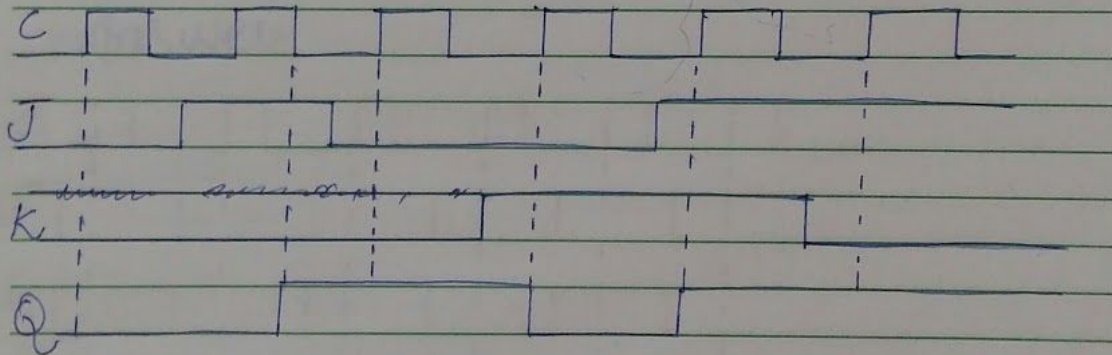
"Question no 8"

Answer:



"Question no 9"

Answer:



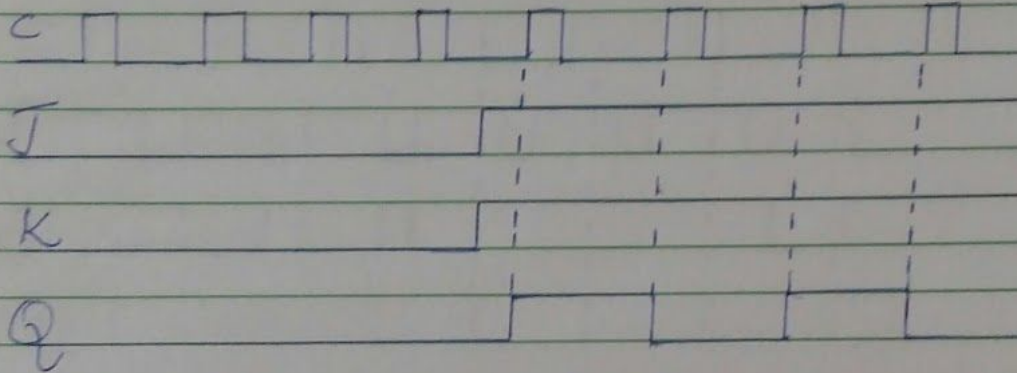


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6

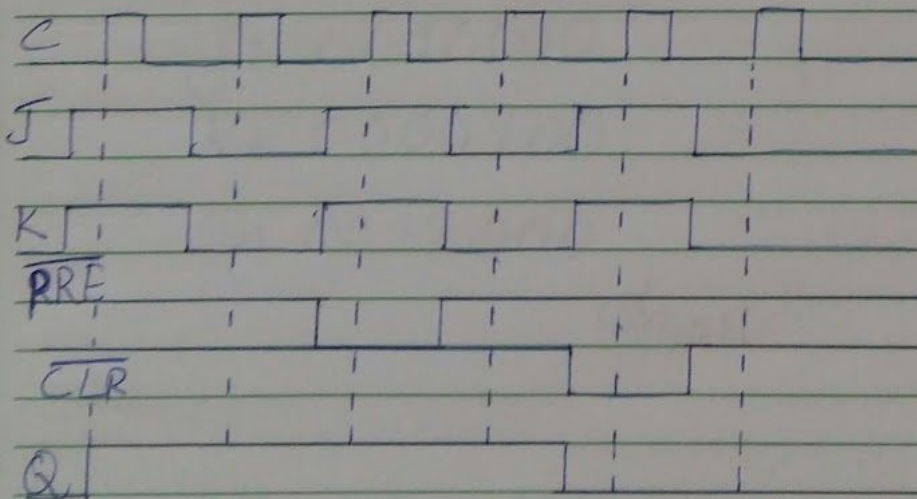
"Question no 10"

Answer:-



"Question no 11"

Answer:-







Date \_\_\_\_\_

8

"Question no "14"

Answer:-

C

J<sub>1</sub>

J<sub>2</sub>

J<sub>3</sub>

K<sub>4</sub>

K<sub>2</sub>

K<sub>3</sub>

Date \_\_\_\_\_

9

Question no 15"

Answer:-

C

J<sub>2</sub>

J<sub>2</sub>

J<sub>3</sub>

K<sub>1</sub>

K<sub>2</sub>

K<sub>3</sub>

J

K

PRE

CLR

Q

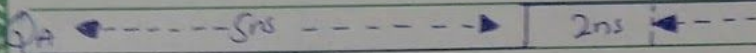
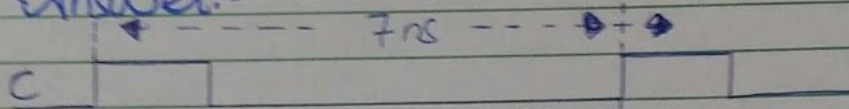


Date \_\_\_\_\_

10

"Question no 16"

Answer:-

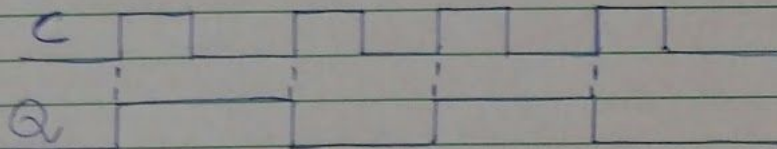


$$T_{min} = 5ns + 2ns = 7ns$$

$$f_{max} = \frac{1}{T_{min}} = \frac{1}{7ns} = 142.9 MHz$$

"Question no 17"

Answer:-



Divided by 2