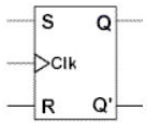
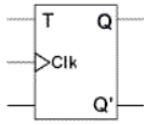
Q1

A	B	C	A'	B'	C'	ABC	A' + B' + C'	(ABC)'
0	0	0	1	1	1	0	1	1
0	0	1	1	1	0	0	1	1
0	1	0	1	0	1	0	1	1
0	1	1	1	0	0	0	1	1
1	0	0	0	1	1	0	1	1
1	0	1	0	1	0	0	1	1
1	1	0	0	0	1	0	1	1
1	1	1	0	0	0	1	0	0

Q2

<table>
<tr><th>FLIP-FLOP NAME</th><th>FLIP-FLOP SYMBOL</th><th>CHARACTERISTIC TABLE</th><th>CHARACTERISTIC EQUATION</th><th>EXCITATION TABLE</th></tr>
<tr>
<td>SR</td>
<td> 
</td>
<td>
<table>
<tr><th>S</th><th>R</th><th>Q(next)</th></tr>
<tr><td>0</td><td>0</td><td>Q</td></tr>
<tr><td>0</td><td>1</td><td>0</td></tr>
<tr><td>1</td><td>0</td><td>1</td></tr>
<tr><td>1</td><td>1</td><td>?</td></tr>
</table>
</td>
<td>Q(next) = S + R'Q
SR = 0</td>
<td>
<table>
<tr><th>Q</th><th>Q(next)</th><th>S</th><th>R</th></tr>
<tr><td>0</td><td>0</td><td>0</td><td>X</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>1</td></tr>
<tr><td>1</td><td>1</td><td>X</td><td>0</td></tr>
</table>
</td>
</tr>
<tr>
<td>T</td>
<td> 
</td>
<td>
<table>
<tr><th>T</th><th>Q(next)</th></tr>
<tr><td>0</td><td>Q</td></tr>
<tr><td>1</td><td>Q'</td></tr>
</table>
</td>
<td>Q(next) = TQ' + T'Q</td>
<td>
<table>
<tr><th>Q</th><th>Q(next)</th><th>T</th></tr>
<tr><td>0</td><td>0</td><td>0</td></tr>
<tr><td>0</td><td>1</td><td>1</td></tr>
<tr><td>1</td><td>0</td><td>1</td></tr>
<tr><td>1</td><td>1</td><td>0</td></tr>
</table>
</td>
</tr>
</table>

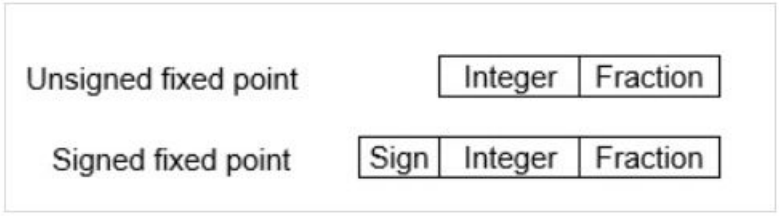
Q3

The excess-3 code (or XS3) is a non-weighted code used to express code used to express decimal numbers. ... It is particularly significant for arithmetic operations as it overcomes shortcoming encountered while using 8421 BCD code to add two decimal digits whose sum exceeds 9.

Q4

This representation has fixed number of bits for integer part and for fractional part. For example, if given fixed-point representation is IIII.FFFF, then you can store minimum value is 0000.0001 and maximum

value is 9999.9999. There are three parts of a fixed-point number representation: the sign field, integer field, and fractional field.



Q5

Stacks can be used to evaluate postfix notation equations (also known as Reverse Polish notation).

So the algorithm moves along the expression, pushing each operand on the stack while operators cause two items to be popped off the stack, evaluated and the result pushed back on the stacks.

Q6

The desired three types for any computer system organization are as given below:

SISD (Single instruction single data)

SIMD (Single instruction multiple data)

MIMD (multiple instruction multiple data)

Q7 confirm then write this ans

Control Test Read Write

Q8

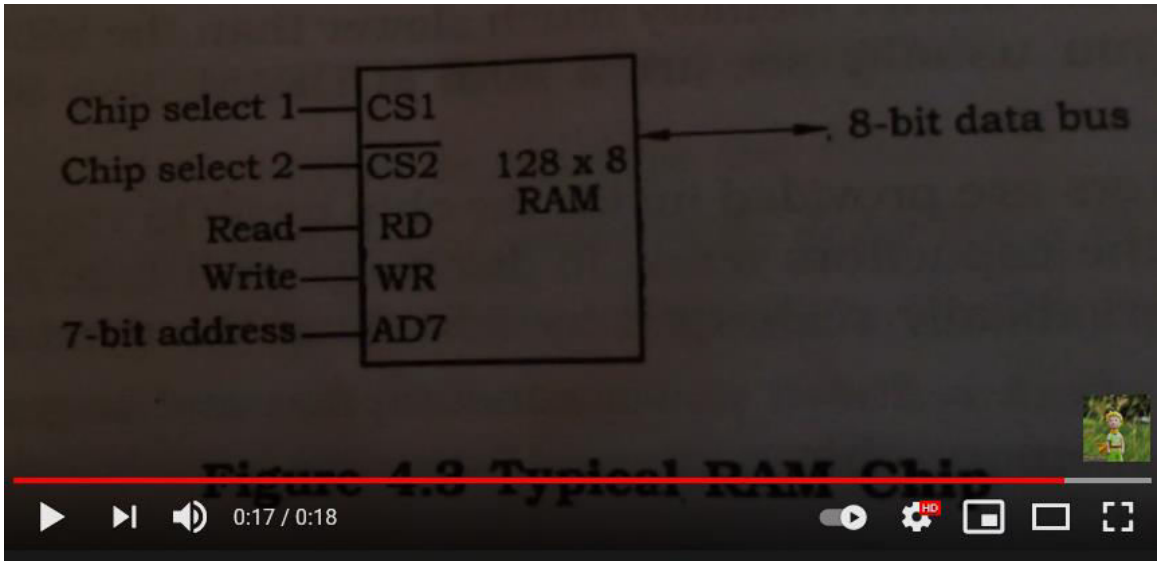
Disadvantages of polling are the standby time of some devices that is shorter than the response time and then another method of transmission should be applied, as well as that the CPU consumes unnecessary time to check devices that have not searched for data transfer.

Time is wasted during polling.

Link sharing is not fair since each station has the equal probability of winning in each round.

Few stations might starve for sending the data.

Q9

S.NO	Volatile Memory	Non-Volatile Memory
1.	Volatile memory is the type of memory in which data is lost as it is powered-off.	Non-volatile memory is the type of memory in which data remains stored even if it is powered-off.
2.	Contents of Volatile memory is stored temporarily.	Contents of Non-volatile memory is stored permanently.
3.	It is faster than non-volatile memory.	It is slower than volatile memory.
4.	**RAM(Random Access Memory)** is an example of volatile memory.	**ROM(Read Only Memory)** is an example of non-volatile memory.
5.	In volatile memory, data can be easily transferred in comparison to non-volatile memory.	In non-volatile memory, data can not be easily transferred in comparison to volatile memory.
6.	In Volatile memory, process can read and write.	In Non-volatile memory, process can only read.
7.	Volatile memory generally has less storage capacity.	Non-volatile memory generally has more storage capacity than volatile memory.
8.	In volatile memory, the program's data are stored which are currently in process by the CPU.	In non-volatile memory, any kind of data which has to be saved permanently are stored.
9.	Volatile memory is more costly per unit size.	Non-volatile memory is less costly per unit size.
10.	Volatile memory has a huge impact on the system's performance.	Non-volatile memory has a huge impact on a system's storage capacity.
11.	In volatile memory, processor has direct access to data.	In non-volatile memory, processor has no direct access to data.
12.	Volatile memory chips are generally kept on the memory slot.	Non-volatile memory chips are embedded on the motherboard.

Q10