If L1 is expressed by r1, then the language expressed by r1* will be _____

Answer (Please select your correct option)

○ Regular

○ Ir-regular

○ Infinite

○ Such language does not exist

Made By: Waqar Siddhu

"One language can be expressed by _____ FA".

Answer (Please select your correct option)

○ only one

○ any

○ more than one

○ only two

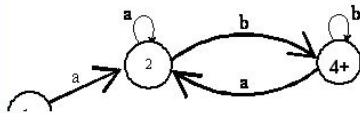Below given FA can be expressed by the _____ RE.

Answer (Please select your correct option)

○ (a+b)+a(a + b)*a + b(a + b)*b
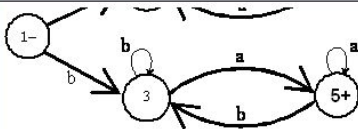
○ a(a + b)*a + b(a + b)*b

○ a (a + b)* b + b (a + b)* a

○ b (a + b)* a + a (a + b)* b

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Answer (Please select your correct option)

○ (a+b)+a(a + b)*a + b(a + b)*b

○ a(a + b)*a + b(a + b)*b

○ a (a + b)* b + b (a + b)* a

○ b (a + b)* a + a (a + b)* b

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In TG there may exist _____ paths for certain string.

Answer (Please select your correct option)
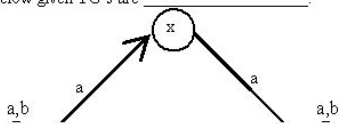
○ only one

○ only two

○ only three

○ no

Below given TG's are _____ .

Answer (Please select your correct option)

○   Equivalent

○   Non-equivalent

○   Not valid

○   There is no way to determine this condition

Answer (Please select your correct option)

○ Equivalent

○ Non-equivalent

○ Not valid

○ There is no way to determine this condition

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Answer (Please select your correct option)

○ Equivalent

○ Non-equivalent

○ Not valid

○ There is no way to determine this condition

Answer (Please select your correct option)

○　Equivalent

○　Non-equivalent

○　Not valid

○　There is no way to determine this condition

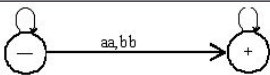**Answer (Please select your correct option)**

○ Equivalent

○ Non-equivalent

○ Not valid

○ There is no way to determine this condition

GTG can have _____ final state.

Answer (Please select your correct option)

○ 0

○ 1

○ More than 1

○ More than 2

If r1 and r2 are regular expressions then r1+r2 is a _____ .

Answer (Please select your correct option)

○ RE

○ FA

○ TG

○ GTG

Alphabet $\Sigma = \{a,bc,cc\}$ has number of letters equal to _____.

Answer (Please select your correct option)

○ One

○ Two

○ Three

○ Four

If r1 is a regular expression then r1* is a _____.

Answer (Please select your correct option)

○ GTG

○ NFA

○ FA

○ RE

Show that any language that can be accepted by a Transition Graph (TG) can also be accepted by another TG with an even number of states.
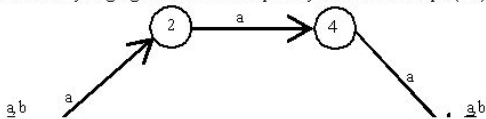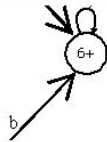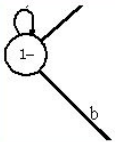

Answer (Please select your correct option)

○ bababa

○ ababab
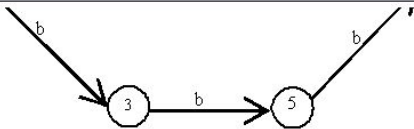
○ aaaab

○ bbaabb

Answer (Please select your correct option)

○ bababa

○ ababab

○ aaaab

○ bbaabb

Answer (Please select your correct option)

○ bababa

○ ababab
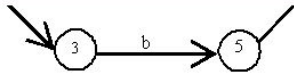
○ aaaab

○ bbaabb

Above given TG accepts the _____ string.

Answer (Please select your correct option)

○ bababa

○ ababab

○ aaaab

○ bbaabb

In _____ there must be transition for all letters.

Answer (Please select your correct option)

○ NFA

○ FA

○ TG

○ GTG
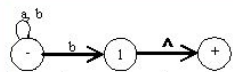
Above given structure is a _____.

Answer (Please select your correct option)

○ FA

○ NFA

○ NFA - ^

○ RE

Answer (Please select your correct option)

- ○ FA

- ○ NFA

- ○ NFA -^

- ○ TG

Above given structure is a _____.

Answer (Please select your correct option)

○ FA

○ NFA

○ NFA -^

○ TG
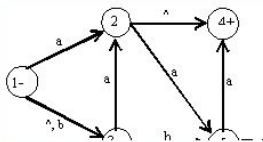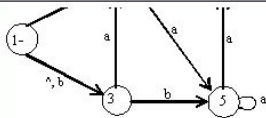
If we want to make a Moore machine equivalent to Mealy machine then_____

Answer (Please select your correct option)

○ We should ignore the extra character printed by the Moore machine.

○ We should ignore the extra character printed by the Mealy machine.

○ We will make the initial state as a no carry state.

○ We should not ignore the extra character printed by the Moore machine.

Choose the correct word produced by the RE (a*b*)ab:

Answer (Please select your correct option)

○ aaaa

○ bbbb

○ abab

○ Null

The _____ machine helps in building a machine that can perform the addition of binary numbers.

Answer (Please select your correct option)

○ Incrementing
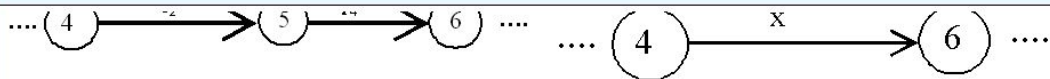
○ Complementing

○ Decrementing

○ Multiplication

1   r1* r2 r3*

2   (r1r2r3)*

3   r1*r2*r3*

4   None of the given

.... (4) ———→ (5) ———→ (6) .... (4) ———X———→ (6) ....

Considering Kleene's theorem, what RE should be in place of X in the 2nd GTG.

Answer (Please select your correct option)

○ r1* r2 r3*

○ (r1r2r3)*

○ r1*r2*r3*

○ None of the given

There are _____ steps in the recursive definition of languages.

Answer (Please select your correct option)

○ 1

○ 2

○ 3

○ 4

Consider the following Regular Expression (RE): a (a + b)*b + b(a + b) a.
All of the following words are accepted except _____.

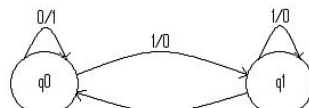**Answer (Please select your correct option)**

○ aab

○ abaab

○ bab

○ bba

Consider the following machine:

Answer (Please select your correct option)

○ 1000110010

○ 1000110010

○ 1000111010

○ 0111000110

Which of the following will the output for input string "0111000101":

Answer (Please select your correct option)

○ 1000110010

○ 1000110010

○ 1000111010
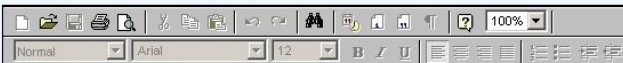
○ 0111000110

Made By: Waqar Siddhu

Read the following statements carefully. If the statement is true write true otherwise write false.

a) Kleene's star and Kleene's closure are different
b) Length of output string is one less than that of input string in mealy machine.

Answer (Please click here to Add Answer)

Let us consider incrementing mealy machine.What operations could be performed using the incrementing Mealy machine?
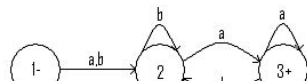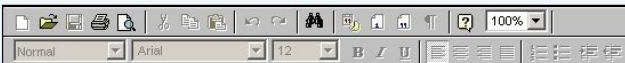
Answer (Please click here to Add Answer)

| Normal | Arial | 12 | **B** *I* <u>U</u> |

Take closure of the given Finite Automaton (FA):

Answer (Please click here to Add Answer)

Answer (Please click here to Add Answer)

Normal   Arial   12   **B** *I* <u>U</u>
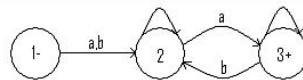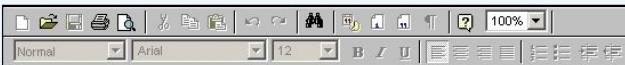
Suppose a Maze of 20 boxes, 1 box for initial and 1 for the final state. There are 5 boxes for non-moveable states while the rest of boxes are used for transitions. Draw a Nondeterministic Finite Automaton (NFA) for the given Maze.

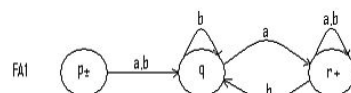Marks [2.5+2.5]

Answer (Please click here to Add Answer)

Normal   Arial   12   **B** *I* U

Concatenate the following two FA's:

Answer (Please click here to Add Answer)
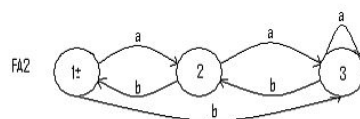
Answer (Please click here to Add Answer)

Q.No=answer	page
1=a	10
2=c	14
3=no idea	
4=d	19
5=no idea	
6=more than 1	
7=a	9
8=c	moazz
9=d	9
10=c	repeat
11=NFA	45
12=b	43
13=c	42
14=a	repeat
15=c	idea
16=a	60
17=d	
18=c	7
19=bab	
20=noidea	