

V SEMESTER B.Tech. Data Science - QUIZ 1

Natural Language Processing (DSE 3155)

Duration: 20 minutes

Each Question Carries 0.5 mark

Total Marks: 5

1. The appropriate morphological parsed output for the inputs **met** and **lit** is _____

1. **meet + V + PAST, light + V + PAST**

2. met + V + PAST-PART, lit + V + PAST

3. meet + V + PAST, lit + V + PAST_PART

4. meet + V + PAST-PART, light + V + PAST

2. The following line refers to _____

4+8=8+4

a) **Different syntax, same semantics**

b) same syntax, different semantics

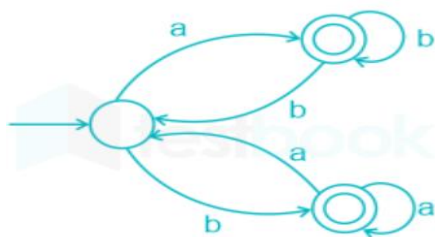
c) Different syntax, different semantics

d) Same Syntax, Same semantics

3. Write regular expressions for the following:

a) one or more digits, optionally followed by a capital letter _____ **\d+[A-Z]***

4. Which one of the following regular expressions correctly represents the language of the finite automaton given below?



A. $ab^*bab^*+ba^*aba^*$

B. $(ab^*b)^*ab^*+(ba^*a)^*ba^*$

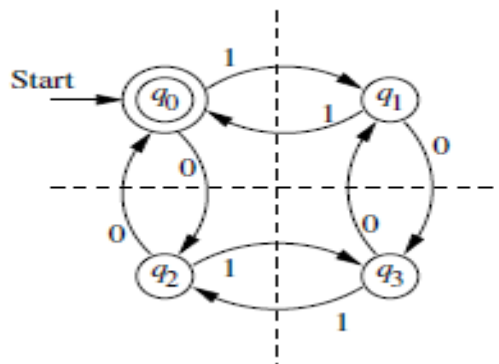
C. $(ab^*b+ba^*a)^*(a^*+b^*)$

D. $(ba^*a+ab^*b)^*(ab^*+ba^*)$

{a,b, ab, ba, baba, baa,abb, abab, abbbba,}

5. 'Computer' vs 'Computational' is an example of _____ morphology.

- a) Inflectional
 - b) **Derivational**
 - c) Cliticization
 - d) None of the above
6. Which of the following are Anchors in regular expression?
- 1) * and +
 - 2) **^ and \$**
 - C) ? and {}
 - D) \d and \w
7. Design a DFA to accept the language $L = \{w \mid w \text{ has both an even number of 0's and an even number of 1's}\}$



8. Write a regular expression and give the corresponding automata for each of the following sets of binary strings.
- 1. all binary strings except empty string : _____ **(0|1)(0|1)***
 - 2. contains the substring 110 : _____ **(0|1)*110(0|1)***
9. 'walk', 'talk', 'print' are examples of which type of verb
- A. **Regular verb**
 - B. Irregular verb
 - C. Complex verb
 - D. Normal verb