





---

14. The regular expression that corresponds to the language accepted by M is:

- 1)  $(abcd)^*$       2)  $(a+b+c+d)^*$       3)  $a^*b^*c^*d^*$       4)  $a^*(b+c)^*d^*$       5) هیچکدام
- 

15. The  $\delta^*(q_0, \lambda) = ?$ :

- 1)  $\{q_0\}$       2)  $\{q_1, q_2\}$       3)  $\{q_0, q_1, q_2\}$       4)  $\{q_0, q_1\}$       5) هیچکدام
- 

16. The  $\delta^*(q_1, \lambda) = ?$ :

- 1)  $\{q_1\}$       2)  $\{q_1, q_2\}$       3)  $\{q_0, q_1, q_2\}$       4)  $\{q_0, q_1\}$       5) هیچکدام
- 

17. Let C be a configuration of M s.t.  $(q_0, abcd) \Rightarrow^* C$ . C could be :

- 1)  $(q_0, cd)$       2)  $(q_0, d)$       3)  $(q_0, \lambda)$       4)  $(q_1, d)$       5)  $(q_1, \lambda)$
- 

18. Let  $A = \{M : M \text{ is a DFA}\}$  and  $B = \{M : M \text{ is a NFA}\}$ . Then A is:

- 1) a superset of B      2) the power set of B  
3) a subset of B      4) disjoint with B (i.e.  $A \cap B = \Phi$ )  
5) هیچکدام
- 

19. Let  $L = \{x x^R y : x, y \in \{a, b\}^*\}$ . L is equal to:  $(\sum = \{a, b\})$

- 1)  $\{x x^R : x \in \{a, b\}^*\}$ .  
2)  $\{x : x \text{ و } x^R \in \{a, b\}^*\}$ .  
3)  $\{x : x \in \{a, b\}^*\}$ .  
4)  $\{xx : x \in \{a, b\}^*\}$ .  
5) هیچکدام
- 

20. Let  $L = \{x y x^R : x, y \in \{a, b\}^*\}$ . L is equal to  $(\sum = \{a, b\})$

- 1)  $\{x x^R : x \in \{a, b\}^*\}$ .  
2)  $\{x : x \text{ و } x^R \in \{a, b\}^*\}$ .  
3)  $\{x : x \in \{a, b\}^*\}$ .  
4)  $\{xx : x \in \{a, b\}^*\}$ .  
5) هیچکدام

پاسخنمه ي امتحان شماره ي يك نظريه ي زبان

شماره ي سؤال	جواب
1	3
2	4
3	4
4	1
5	1
6	3
7	4
8	5
9	2
10	1
11	3
12	3
13	5
14	4
15	3
16	2
17	4
18	3
19	3
20	3

