

TCS_Introduction

Total points 10/10 ?

Test

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50

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☐ A☒ B☐ C

✓ 1]What is the Cardinality of the Power set of the set $\{0, 1, 2\}$? * 1/1

- ☒ 8
- ☐ 6
- ☐ 7
- ☐ 9



✓ 2]The members of the set $S = \{x \mid x \text{ is the square of an integer and } x < 100\}$ is _____ a) * 1/1

- ☐ {0, 2, 4, 5, 9, 58, 49, 56, 99, 12}
- ☒ {0, 1, 4, 9, 16, 25, 36, 49, 64, 81}
- ☐ c) {1, 4, 9, 16, 25, 36, 64, 81, 85, 99}
- ☐ d) {0, 1, 4, 9, 16, 25, 36, 49, 64, 121}



✓ 3]The following two sets 'A' & 'B' are equal. State True/False, $A = \{1, 1, 2, 3\}$, $B = \{1, 2, 3\}$ * 1/1

- ☒ True
- ☐ False



✓ 4]Is set 'S' a set of sets? $S = \{\{1, 2\}, 4, \{3, 5, 9\}\}$ * 1/1

- ☐ yes
- ☒ No



✓ 5]Select which options are correct ? 1. Type 0 grammar can be represented using TM, 2.Finite Automata has least power of computation, 3.Context Sensitive languages can be represented using least bounded Automata, 4.Context free grammar can be represented using Finite Automata *

1/1

- ☐ 1 & 2 is True but 3 & 4 is False
- ☐ None of them is True
- ☒ 1,2,3 are True but 4 is false
- ☐ All are True



✓ 6]If set $A = \{4, 5, 6\}$, set $B = \{a, b, c\}$ and $C = \{6, 5, 4\}$, Select which of the following is True. *

1/1

- ☐ Only set A & B are equivalent
- ☐ Only set A & C are equivalent
- ☐ Only Set A & B are equal
- ☒ Only Set A & C are equal



✓ 7]if A is a proper subset of B, then there does not exists any element in set B which does not belong to set A . State True or False *

1/1

- ☐ True
- ☒ False



✓ 8]FA consist of ----- tuples *

1/1

☐ 4

☒ 5

☐ 3

☐ 6



✓ 9]Finite automata can be represented by *

1/1

☐ Transition Graph

☐ Transition Table

☒ Transition graph and transition table

☐ none of the above



✓ 10]A Finite automata is in -----state *

1/1

☐ accepted

☒ accepted or rejected

☐ rejected

☐ none of the above



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