TCS _quiz-3_sh-20[co3]

Total points 9/10

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Class *

- ( ) TE-A
- (•) TE-B
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Roll no *

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✓ 1]Following context free grammar S —> aB | bA A —>b | aS | bAA B —> b | bS | aBB generates strings of terminals that have * 1/1

- [x] equal number of a's and b's
- [ ] odd number of a's and odd number b's
- [ ] even number of a's and even number of b's
- [ ] odd number of a's and even number of a's

✓ 2]Which of the following statement is correct? * 1/1

- [ ] All languages can not be generated by CFG
- [ ] Any regular language has an equivalent CFG
- [ ] Some non regular languages can't be generated by CFG
- [x] both (b) and (c)

✓ 3]If L1 and L2 are context free language and R a regular set, then which one of the languages below is not necessarily a context free language? * 1/1

- [ ] L1 L2
- [x] L1 ∩ L2
- [ ] L1 ∩ R
- [ ] L1 ∪ L2

✓ 4] In a context-sensitive grammar, number of grammar symbols on the left hand side of a production can't be greater than the number of * 1/1

- grammar symbols on the right hand side
- terminals on the right hand side
- ◉ non-terminals on the right hand side ✓
- all of these

✓ 5]CFG can be recognized by a * 1/1

- ◉ push-down automata ✓
- DFA
- both (a) and (b)
- none of these

✓ 6] A given grammar is called ambiguous if * 1/1

- two or more productions have the same non-terminal on the left hand side
- a derivation tree has more than one associated sentence
- ◉ there is a sentence with more than one derivation tree corresponding to it ✓
- brackets are not present in the grammar

✓ 7]The intersection of CFL and regular language * 1/1

- is always regular
- ◉ is always context free ✓
- both (a) and (b)
- need not be regular

✓ 8]Which of the following denotes Chomskian hiearchy? * 1/1

- ◉ REG ⊂ CFL ⊂ CSL ⊂ type0 ✓
- CFL ⊂ REG ⊂ type0 ⊂ CSL
- CSL ⊂ type0 ⊂ REG ⊂ CFL
- CSL ⊂ CFL ⊂ REG ⊂ type0

✓ 9]The following grammar G = (N, T, P, S)N = {S, A, B}T = {a, b, c}P : S → aSaS → aAaA → bBB → bBB → c is * 1/1

- is type 3
- ◉ is type 2 but not type 3 ✓
- is type 1 but not type 2
- is type 0 but not type 1

✗ 10]Consider the following CFG S → aB S → bA B → b A → a B → bS A → aS B → aBB A → bAA Consider the following derivationS ⇒ aB⇒ aaBB⇒ aaBb⇒ aabSb⇒ aabbAb⇒ aabbab This derivation is * 0/1

- ○ a leftmost derivation
- ○ a rightmost derivation
- ◉ both leftmost and rightmost derivation ✗
- ○ neither leftmost nor rightmost derivation