Quiz 12

Due Nov 14 at 11:59pm **Points** 6 **Questions** 6
Available Nov 10 at 11:59pm - Dec 5 at 11:59pm **Time Limit** 30 Minutes

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	15 minutes	6 out of 6

ⓘ Correct answers are hidden.

Score for this quiz: **6** out of 6
Submitted Nov 14 at 8:48pm
This attempt took 15 minutes.

Question 1 — 1 / 1 pts

```
Which of the following statements are accurate:
A. Many programming languages can be described by means of DCFLs.
B. Every NPDA can be converted to a DPDA
C. The languages accepted by DPDA are called DCFL (Deterministic Context Fre
e Languages) which are subset of NCFL (Non Deterministic CFL) accepted by NP
DA.
```

- [x] A
- [ ] None of A, B , C
- [x] C
- [ ] B

Question 2 — 1 / 1 pts

Given a grammar G: (V, T, S, P)

V = {S, B, C} , T = {1, 2, 3} , P:

PDA can be described for which of the following grammars,

```
(I)
S → 1SBC | 123
1B → 12
2B → 22
C → 23
C → 33

(II)
S → 1B2 | 2
B→ B1 | 1
```

- None of I or II
- II only
- Both I and II
- I only

Question 3

1 / 1 pts

Which of the following pairs have DIFFERENT expressive power?

```
A. Deterministic context-free grammars and  non-deterministic context-free g
rammars
B. All  linear grammars and left linear grammar
```

- None of A, B
- A
- B

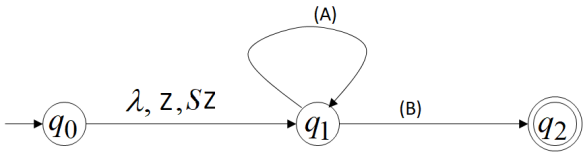
Question 4

1 / 1 pts

Given a CFG,

```
S → XSX | aY
X → Y | S
Y → b | λ
```

The equivalent transition diagram description of a PDA with the transition functions (A and B are not shown) is given below.



Which transition functions are a correct transitions on (B)

```
I. λ,λ,λ
II. λ,Z,λ
III.λ,λ,Z
IV. a,Z,λ
V.  b,Z,λ
```

- [x] II
- [ ] III
- [ ] IV
- [ ] I
- [ ] V

Question 5

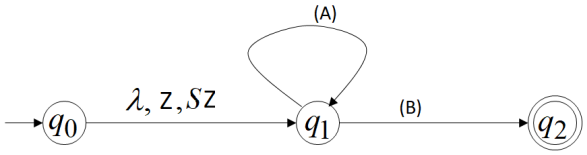
1 / 1 pts

Given a CFG,

Typesetting math: 100%

```
S → T | V
T → aTb | U
U → Ub | b
V → aVc | W
W → Wc | c
```

The equivalent transition diagram description of a PDA with the transition functions (A and B are not shown) is given below.



Which transition functions are a correct transitions on (A)

I. λ,V,S
II. λ,T,aTb
III. λ,W, Wc
iV. a,b,λ
V. λ, W, V

- [ ] I
- [ ] IV
- [x] II
- [ ] V
- [x] III

Question 6

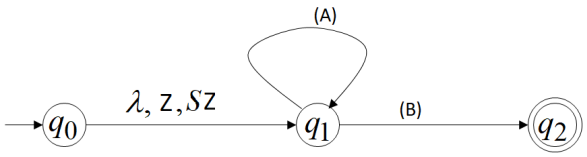
1 / 1 pts

Given a CFG,

```
S → XSX | aY
X → Y | S
Y → b | λ
```

The equivalent transition diagram description of a PDA with the transition functions (A and B are not s hown) is given below.

Typesetting math: 100%



Which transition functions are a correct transitions on (A)

I. λ, S, Ya
II. \(\lambda\), S, X
III. \(\lambda\), X, S
IV. a, S, Y
V. b, b, \(\lambda\)
VI. \(\lambda\), S, aY

- [ ] I
- [x] III
- [ ] II
- [x] VI
- [x] V
- [ ] IV

Quiz Score: **6** out of 6

Typesetting math: 100%