

X


<https://swayam.gov.in>

https://swayam.gov.in/nc_details/NPTEL

 NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Compiler Design (course)


Click to register
for Certification
exam

https://examform.nptel.ac.in/2025_01/exam_form/dashboard

If already
registered, click
to check your
payment status

Course
outline

About
NPTEL ()

How does an
NPTEL
online
course
work? ()

Week 0 : ()

Week 1 ()

Week 2 ()

Week 3 ()

Week 4 ()

Week 5 ()

Week 6 : Assignment 6

The due date for submitting this assignment has passed.

Due on 2025-03-05, 23:59 IST.

Assignment submitted on 2025-02-21, 18:11 IST

1) For the grammar 1 point

$$S' \rightarrow S$$

$$S \rightarrow CC$$

$$C \rightarrow cC \mid d$$

In state 0 of LR(1) parser, an item included is

- a) $C \rightarrow .cC; c$
- b) $C \rightarrow .cC; d$
- c) $C \rightarrow .cC; c, d$
- d) $C \rightarrow .cC; c, \$$

- ☐ a
☐ b
☒ c
☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

c

Week 6 ()

- ☐ Lecture 27 :
Parser
(Contd.) (unit?
unit=64&lesso
n=65)
- ☐ Lecture 28 :
Parser
(Contd.) (unit?
unit=64&lesso
n=66)
- ☐ Lecture 29 :
Parser
(Contd.) (unit?
unit=64&lesso
n=67)
- ☐ Lecture 30 :
Parser
(Contd.) (unit?
unit=64&lesso
n=68)
- ☐ Lecture 31 :
Parser
(Contd.) (unit?
unit=64&lesso
n=69)
- ☐ Lecture
Materials
(unit?
unit=64&lesso
n=70)
- ☐ Feedback
Form (unit?
unit=64&lesso
n=71)
- ☐ Week 06 :
Assignment
Solution (unit?
unit=64&lesso
n=169)
- ☒ **Quiz: Week 6
: Assignment
6
(assessment?
name=187)**

Week 7 ()**Week 8 ()**

2) For the grammar

$$S' \rightarrow S$$

$$S \rightarrow CC$$

$$C \rightarrow cC \mid d$$

In state 0 of LR(1) parser, an item included is

- a) $C \rightarrow .d; c$
- b) $C \rightarrow .d; d$
- c) $C \rightarrow .d; c, d$
- d) $C \rightarrow .d; c, \$$

☐ a☐ b☒ c☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

c

1 point

3)

1 point

In SLR parsing to get a shift-reduce conflict for state I on terminal symbol 'a',

- a) $A \rightarrow \alpha.\beta$ with $\text{First}(\beta)$ containing 'a' should be in I
- b) $A \rightarrow \delta.$ be in I with $\text{Follow}(A)$ having 'a'
- c) $A \rightarrow \alpha.\beta$ with $\text{First}(\beta)$ containing 'a' should be in I and $A \rightarrow \delta.$ be in I with $\text{Follow}(A)$ having 'a'
- d) None of the other options

☐ a☐ b☒ c☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

c

4)

1 pointIn state I we have the items $A \rightarrow \alpha.$ and $B \rightarrow \delta.$, $\text{First}(A)$, $\text{Follow}(A)$ and $\text{Follow}(B)$ contains the symbol 'a'. This leads to

- a) Shift-reduce conflict
- b) Reduce - reduce conflict
- c) Both shift-reduce and reduce -reduce conflicts
- d) No conflicts

☐ a☒ b☐ c

Week 9 ()**Week 10 ()****Week 11 ()****Week 12 ()****DOWNLOAD
VIDEOS ()****Text
Transcripts
()****Books ()**☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

b

5) Which of the following statements is true regarding LR parsers? **1 point**

- a) SLR and Canonical LR have the same number of states.
- b) LALR and Canonical LR have the same number of states.
- c) SLR and LALR have the same number of states.
- d) All three have the same number of states.

☐ a☐ b☐ c☒ d

No, the answer is incorrect.

Score: 0

Accepted Answers:

c

6) **1 point**

Construction of parsing table in which strategies do not need the Follow set?

- a) SLR and canonical LR
- b) Canonical LR and LALR
- c) SLR and LALR
- d) None of the given options

☐ a☒ b☐ c☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

b

7) **1 point**

In SLR parsing for the grammar

 $E' \rightarrow E$ $E \rightarrow aEbE \mid bEaE \mid \varepsilon$

In state 0, for inputs 'a' and 'b'

- a) Both will have shift-reduce conflict
- b) Only 'a' will have shift-reduce conflict
- c) Only 'b' will have shift-reduce conflict
- d) Neither of the other options

- ☒ a
☐ b
☐ c
☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

a

8) Amount of look ahead in LALR parser is

1 point

- a) 1
b) 2
c) 3
d) None

- ☒ a
☐ b
☐ c
☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

a

9) In SLR parsing for the grammar

0 points

$S \rightarrow B \mid SabS$

$B \rightarrow bB \mid \epsilon$

In state 0, for inputs 'a' and 'b'

- a) Both will have shift-reduce conflict
b) Only 'a' will have shift-reduce conflict
c) Only 'b' will have shift-reduce conflict
d) Neither of the other options

- ☐ a
☒ b
☐ c
☐ d

Yes, the answer is correct.

Score: 0

Accepted Answers:

b

10)

1 point

Which of the following parser types is the most powerful in terms of recognizing a broader class of grammars?

- a) LL(1)
- b) SLR(1)
- c) LALR(1)
- d) LR(1)

- ☐ a
- ☐ b
- ☐ c
- ☒ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

d

11)

1 point

What is the similarity between LR, LALR and SLR

- a) Use same algorithm, but different parsing table.
- b) Same parsing table, but different algorithm.
- c) Their Parsing tables and algorithm are similar but uses top down approach.
- d) Both Parsing tables and algorithm are different.

- ☒ a
- ☐ b
- ☐ c
- ☐ d

Yes, the answer is correct.

Score: 1

Accepted Answers:

a