

# Unit 9 - Week 7

## Course outline

### How to access the portal

### Pre-Course

### Week 1

### Week 2

### Week 3

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### Week 6

### Week 7

● Scheduling in High-level Synthesis

● Force Directed Scheduling and Register Allocation

● High-level Synthesis and Timing Issues

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## Assignment 7

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2019-09-18, 23:59 IST.**

1) Which of the following is true about the HEIGHT priority function used in List Scheduling 1 point

- It always gives better results than MOBILITY
- It could sometimes give better results than MOBILITY
- It does not need to be recomputed as List Scheduling progresses
- It gives a schedule with higher latency compared to MOBILITY

No, the answer is incorrect.

Score: 0

Accepted Answers:

*It could sometimes give better results than MOBILITY*

*It does not need to be recomputed as List Scheduling progresses*

2) Different operation types are handled in List Scheduling by: 1 point

- Using different Ready Lists
- Multiple invocations of List Scheduling
- Adjusting the calculation of the control step
- Invoking timing analysis multiple times

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Using different Ready Lists*

3) Multi-function units are useful in High Level Synthesis because they may result in lower area 1 point

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:

*TRUE*

4) Which of the following is true about handling multicycled operations in scheduling? 1 point

- It helps improve utilisation of the clock period
- It requires that the input data to a multicycle unit be held stable for multiple clock cycles
- It requires that the output data of a multicycle unit be held stable for multiple clock cycles
- It requires that the clock period be as wide as the longest combinational delay of the function units

No, the answer is incorrect.

Score: 0

Accepted Answers:

*It helps improve utilisation of the clock period*

*It requires that the input data to a multicycle unit be held stable for multiple clock cycles*

5) Chaining of function units is applicable during scheduling when function unit delays are much longer than the clock period 1 point

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:

*FALSE*

6) In time-constrained scheduling, the schedule is expected to minimise the resources used 1 point

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:

*TRUE*

7) In List Scheduling algorithm, The HEIGHT priority function results in less computation compared to MOBILITY used as a dynamic priority function 1 point

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:

*TRUE*

8) The maximum Expected Operator Cost (EOC) value in Force Directed Scheduling gives an idea about the resources required by the schedule 1 point

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:

*TRUE*

9) In register allocation, the life-time of a variable is defined as 1 point

- The time range from its definition to its first use
- The time range from its definition to its last use
- The set of clock cycles where its value is defined
- The set of clock cycles where its value is used

No, the answer is incorrect.

Score: 0

Accepted Answers:

*The time range from its definition to its last use*

10) In the conflict graph formulated for the register allocation problem, an edge between two nodes represent that the life-times of the variables corresponding to the nodes are non-overlapping 1 point

- TRUE
- FALSE

No, the answer is incorrect.

Score: 0

Accepted Answers:

*FALSE*