

# Unit 4 - Week 3

## Course outline

How to access the portal?

Week 1

Week 2

**Week 3**

- Information-driven Scheduling
- Dependency Structure Matrix-I
- Dependency Structure Matrix-II
- Quiz : Assignment 3
- Feedback Form

Week 4

Lecture Materials

Solution of Assignments

Transcript PDF Files

## Assignment 3

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) What is the primary function of Design/Dependency Structure Matrix (DSM)?

1 point

- To model information dependencies
- to perform iteration
- to multiply matrices
- to calculate duration

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
To model information dependencies

2) Which of the dependency relationship listed below results in iteration?

1 point

- Independent
- Dependent
- Interdependent
- Semi-independent

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Interdependent

3) Which of the following is not defined as DSM?

1 point

- Dependency Structure Matrix
- Incident Matrix
- Design Precedence Matrix
- Design Solution Matrix

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Design Solution Matrix

4) Arrange the DSM operations in the correct order:

1 point

- (1) Partitioning
- (2) Formation of DSM
- (3) Tearing
- (4) Iteration Modelling
- (5) Re-partitioning

- (4)(2)(5)(1)(3)
- (5)(3)(2)(4)(1)
- (2)(1)(4)(3)(5)
- (2)(1)(3)(5)(4)

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
(2)(1)(3)(5)(4)

5) Unplanned design projects lead to:

1 point

- Rework
- Repetition
- both of the above
- none of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
both of the above

6) The dependencies in a DSM can be represented as

1 point

- 'X' marks
- Binary representation
- Strength of dependency
- All of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
All of the above

7) Pick out the correct DSM for the graphically representation shown in Figure 1.

1 point

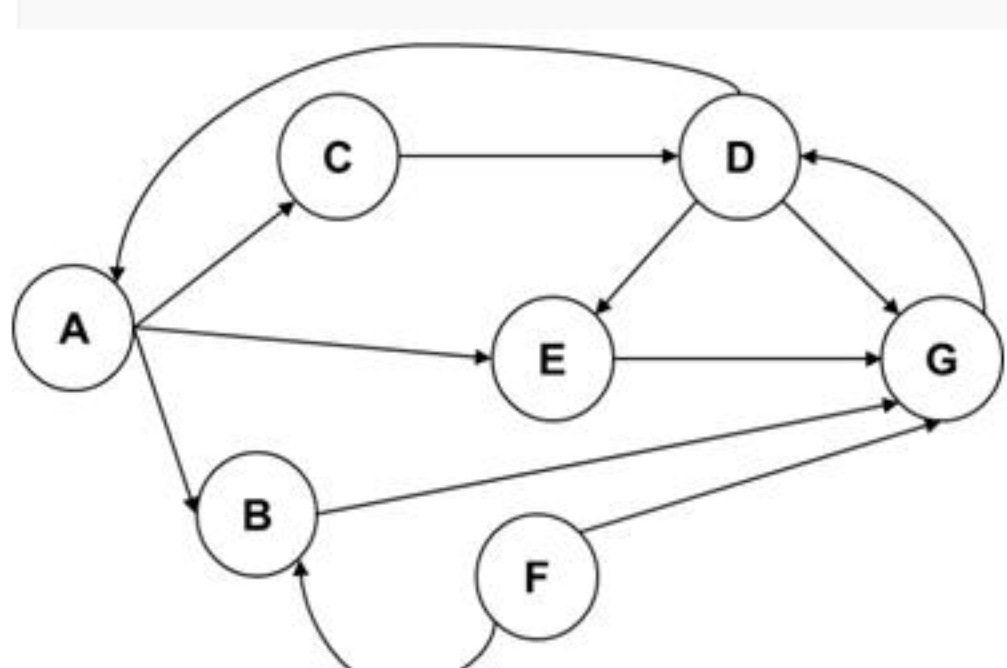


Figure 1

|   | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| A |   |   |   |   |   |   | X |
| B | X |   |   |   |   |   |   |
| C | X |   |   |   |   | X | X |
| D | X |   |   |   | X |   |   |
| E |   |   | X | X |   | X | X |
| F |   |   |   |   |   |   | X |
| G |   | X |   |   |   |   |   |

|   | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| A |   |   |   | X |   |   |   |
| B | X |   |   |   |   |   | X |
| C | X |   |   |   |   |   |   |
| D |   |   | X |   |   |   | X |
| E | X |   |   | X |   |   |   |
| F |   |   |   |   |   |   | X |
| G |   | X |   | X | X | X |   |

|   | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| A |   |   |   | X |   |   |   |
| B |   |   |   | X |   | X |   |
| C | X |   |   |   | X |   | X |
| D |   | X |   |   |   |   |   |
| E | X |   | X |   |   | X |   |
| F | X |   |   |   |   |   | X |
| G |   | X |   |   |   |   |   |

|   | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| A |   |   | X |   |   |   | X |
| B |   |   |   | X |   |   |   |
| C | X |   |   |   | X | X |   |
| D |   |   |   |   |   |   |   |
| E | X |   | X | X |   | X |   |
| F |   | X |   |   |   |   | X |
| G |   |   |   |   |   |   |   |

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
A

|   | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| A |   |   |   | X |   |   |   |
| B | X |   |   |   |   | X |   |
| C | X |   |   |   |   |   |   |
| D |   |   | X |   |   |   | X |
| E | X |   |   | X |   |   |   |
| F |   | X |   |   |   |   | X |
| G |   |   | X | X | X | X |   |

8) How many cycles of length '2' and '3' are there in the block after partitioning the DSM?

1 point

- 1,2
- 0,1
- 1,1
- 2,0
- 2,2

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
1,2

9) What is the correct DSM for the hypothetical example given in Table 1.

1 point

| Activity ID | IPA   | Duration |
|-------------|-------|----------|
| A           | B,D   | 16       |
| B           | C     | 8        |
| C           | -     | 20       |
| D           | E     | 14       |
| E           | C,D,F | 7        |
| F           | C     | 2        |

|   | A  | B | C  | D  | E | F |
|---|----|---|----|----|---|---|
| A | 16 |   |    |    |   |   |
| B |    | 8 | X  |    | X |   |
| C |    |   | 20 |    |   | X |
| D |    | X |    | 14 | X |   |
| E |    |   | X  | X  | 7 | X |
| F |    |   |    |    |   | 2 |

|   | A  | B | C  | D  | E | F |
|---|----|---|----|----|---|---|
| A | 16 | X |    | X  |   |   |
| B |    | 8 | X  |    |   |   |
| C |    |   | 20 |    |   |   |
| D |    |   |    | 14 | X |   |
| E |    |   | X  | X  | 7 | X |
| F |    |   | X  |    |   | 2 |

|   | A  | B | C  | D  | E | F |
|---|----|---|----|----|---|---|
| A | 16 | X |    |    |   |   |
| B | X  | 8 | X  |    |   |   |
| C |    |   | 20 |    |   |   |
| D | X  |   |    | 14 | X | X |
| E |    |   | X  | X  | 7 | X |
| F |    |   | X  |    |   | 2 |

|   | A  | B | C  | D  | E | F |
|---|----|---|----|----|---|---|
| A | 16 | X | X  |    | X |   |
| B |    | 8 |    |    |   |   |
| C | X  |   | 20 |    |   | X |
| D |    | X |    | 14 | X |   |
| E |    |   |    | X  | 7 | X |
| F |    |   | X  |    |   | 2 |

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
A

|   | A  | B | C  | D  | E | F |
|---|----|---|----|----|---|---|
| A | 16 |   |    | X  |   |   |
| B |    | 8 |    | X  |   |   |
| C |    |   | 20 |    |   |   |
| D |    |   |    | 14 | X |   |
| E |    |   | X  | X  | 7 | X |
| F |    |   | X  |    |   | 2 |