

# Unit 3 - Week 2

Course outline
How to access the portal?
Week 1
Week 2
<ul style="list-style-type: none"> <li>Precedence Diagramming Method</li> <li>Line of Balance Method</li> <li>Resource-driven Scheduling</li> </ul>
<input type="radio"/> Quiz : Week 2 Assignment 2
<input type="radio"/> Feedback form
Week 3
Week 4
Lecture Materials
Solution of Assignments
Transcript PDF Files

## Week 2 Assignment 2

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

**Due on 2019-09-11, 23:59 IST.**

1) Resource leveling will generally: 1 point

- Reduce the overutilization of resources.
- Reduce the time needed to complete the project.
- Reduce the resources to the lowest skill possible.
- Increase the total time necessary to do all the tasks.

No, the answer is incorrect. Score: 0

Accepted Answers: Reduce the overutilization of resources.

2) Assumptions made in resource leveling are: 1 point

- A. Duration of project is fixed.
- B. Any activity can be performed with any resource.
- C. Productivity of different resources is considered as same.
- D. Activities cannot be split once started.

Which of the above assumptions are correct?

- 1 and 2.
- 2, and 3.
- 3 and 4.
- All of the above.

No, the answer is incorrect. Score: 0

Accepted Answers: All of the above.

3) Consider the following: 1 point

1. ASAP.
2. Minimum slack first.
3. Simulated annealing.
4. Most successors.
5. Tabu search.

Which of the above are examples of Complex heuristics?

- 1 and 2.
- 1, 2, 3 and 5.
- 4 and 5.
- Most successors.
- 3 and 5.

No, the answer is incorrect. Score: 0

Accepted Answers: 3 and 5.

4) A contractor has to complete a job consisting of four activities as given in the table below. Assume that the activities are executed without interruptions. Then, the total duration of the project is \_\_\_\_ days. The maximum value of relationship float is \_\_\_\_.

Activities	Duration (days)	IPA
A	5	-
B	7	A(FS4)
C	3	A(SS10), B(SF6)
D	4	B(FF1), C(SS2)

- 17, 1.
- 17, 2.
- 18, 2.
- 19, 1.

No, the answer is incorrect. Score: 0

Accepted Answers: 18, 2.

Linked data questions - 1

Perform the PDM network analysis assuming that the activities can be split during the execution and answer Q.5 & 6

Activity ID	Duration (days)	IPA
A	4	-
B	6	A(FS2)
C	6	A(SS1), B(SF4)
D	3	C
E	8	D(FS-1)
F	3	E(SS3), E(FF-2)
G	5	F(SS1), F(FF1)

5) Number of activities with zero total float and the maximum value of total float respectively are: 0 points

- 4, 3.
- 3, 3.
- 4, 2.
- 3, 2.

No, the answer is incorrect. Score: 0

Accepted Answers: 3, 2.

6) If the splitting of activities were not allowed, then the number of critical activities are: 1 point

- 3.
- 5.
- 6.
- 7.

No, the answer is incorrect. Score: 0

Accepted Answers: 7.

Linked data questions – 2

The following table represents sequential activities in one dwelling unit construction. Five such units have to be constructed in a particular project. Assume that each activity requires unique crew and only one crew per activity is available. Draw the LoB diagram and answer Q. 7 & 8

Activity	Duration (days)	Buffer (days)
Foundations	5	-
Structural Framing	10	2
Roof	7	3
Walls	4	3
Services	3	1
Finishes	5	2
External works	2	1

7) Read the following statements. 1 point

- i. First dwelling unit in CPM can be completed in 48 days.
- ii. First dwelling unit in LoB can be completed in 88 days.
- iii. 4 activities have end type buffer.
- iv. The project can be completed within 94 days.

Tick the right option (Note: T – True, F – False)

- TFTF
- FTTF
- TTTF
- FTTF

No, the answer is incorrect. Score: 0

Accepted Answers: TTTF

8) A single segment of a project consists of six activities. Their relationships and durations (days) are shown in the table below. The project consists of 10 such segments. Provide buffer of 1 day between each activity and match the following below. 0 points

Activity	IPA	Duration
A	-	2
B	A	5
C	A	2
D	B	2
E	C	4
F	D, E	3

Match the following and choose the right option:

List - I	List - II
(p) 10 <sup>th</sup> segment of activity E starts on day	41
(q) 4 <sup>th</sup> segment of activity D ends on day	42
(r) 1 <sup>st</sup> segment completes on day	43
	44

- (p)-42, (q)-41, (r)-43.
- (p)-42, (q)-44, (r)-43.
- (p)-43, (q)-44, (r)-42.
- (p)-43, (q)-41, (r)-42.

No, the answer is incorrect. Score: 0

Accepted Answers: (p)-43, (q)-44, (r)-42.