Assignment 4

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

Due on 2019-03-27, 23:59 IST.

1) PERT is based on the ______________ approach.
   a. Deterministic
   b. Probabilistic
   c. Continuation
   d. Interval

   (a)
   (b)
   (c)
   (d)

No, the answer is incorrect.
Score: 0
Accepted Answers: (b)

2) The maximum time required to complete the activity in the PERT is considered as ____________.
   a. Optimistic time
   b. Most Probable time
   c. Pessimistic time
   d. Mean time

   (a)
   (b)
   (c)
   (d)

No, the answer is incorrect.
Score: 0
Accepted Answers: (c)

3) The minimum duration of an activity in PERT is called as ______________.
   a. Most likely
   b. Pessimistic

   (a)
   (b)

No, the answer is incorrect.
Score: 0
Accepted Answers: (b)
4) What is the standard deviation of time for an activity with optimistic, most likely, and pessimistic time estimates of 6, 10, 14 days?

a. 4/3
b. 10
c. 1/10
d. 2/3

No, the answer is incorrect.
Score: 0
Accepted Answers:
(c) (d)

5) What is the expected time for an activity with optimistic, most likely, and pessimistic time estimates of 6, 10, 14 days?

a. 7
b. 10
c. 5
d. 12

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a) (b) (c) (d)

6) What is the probability of a project finishing in 70 weeks or less (rounded to two decimals) having an expected completion time of 60 weeks and a standard deviation of five weeks?

a. 0.02
b. 0.48
c. 0.5
d. 0.98

No, the answer is incorrect.
Score: 0
Accepted Answers:
7) The expected time ($t_e$) of a PERT activity in terms of optimistic time ($t_o$), pessimistic time ($t_p$) and most likely time ($t_l$) is given by

- a. $t_e = \frac{t_o + 4t_l + t_p}{6}$
- b. $t_e = \frac{t_o + 4t_p + t_l}{6}$
- c. $t_e = \frac{t_o + 4t_l + t_p}{3}$
- d. $t_e = \frac{t_o + 4t_p + t_l}{3}$

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)

8) Consider the following PERT network:

The optimistic time, most likely time and pessimistic time of all the activities are given in the table below:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Optimistic time (days)</th>
<th>Most likely time (days)</th>
<th>Pessimistic time (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1-3</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1-4</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>2-5</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>3-5</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>5-6</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4-7</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>6-7</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Determine the mean time required to complete the project.
Consider the following PERT network:

The optimistic time, most likely time and pessimistic time of all the activities are given in the table below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Optimistic time (days)</th>
<th>Most likely time (days)</th>
<th>Pessimistic time (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1-3</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1-4</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>2-5</td>
<td>5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>3-5</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>5-6</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4-7</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>6-7</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

The standard deviation of the critical path is ________

(a) 0.33
(b) 0.55
(c) 0.66
(d) 0.88

No, the answer is incorrect.
Score: 0
### Question 10
Given, expected duration of project = 47 days, variance = 9 days. What is the probability of completing the project in 50 days?

<table>
<thead>
<tr>
<th>Option</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>0.63</td>
</tr>
<tr>
<td>b.</td>
<td>0.84</td>
</tr>
<tr>
<td>c.</td>
<td>0.16</td>
</tr>
<tr>
<td>d.</td>
<td>0.37</td>
</tr>
</tbody>
</table>

- (a) 
- (b) 
- (c) 
- (d)

No, the answer is incorrect.

Score: 0

### Question 11
Given, expected duration of project = 47 days, variance = 9 days. What is the probability of completing the project within three days more or less than the expected time?

<table>
<thead>
<tr>
<th>Option</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>0.50</td>
</tr>
<tr>
<td>b.</td>
<td>0.68</td>
</tr>
<tr>
<td>c.</td>
<td>0.25</td>
</tr>
<tr>
<td>d.</td>
<td>0.31</td>
</tr>
</tbody>
</table>

- (a) 
- (b) 
- (c) 
- (d)

No, the answer is incorrect.

Score: 0

### Question 12
Your team members told you that an activity you are working on is most likely to be complete in 20 days. However, in the worst case it might take 30 days, and if all conditions are favorable it might be completed in 15 days.

Determine the PERT Time estimate and the Standard Deviation for this activity.

<table>
<thead>
<tr>
<th>Option</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>20.83, 2.5</td>
</tr>
<tr>
<td>b.</td>
<td>18.33, 2.5</td>
</tr>
<tr>
<td>c.</td>
<td>20.83, 1.66</td>
</tr>
<tr>
<td>d.</td>
<td>18.33, 1.66</td>
</tr>
</tbody>
</table>

- (a) 
- (b) 
- (c) 
- (d)

No, the answer is incorrect.

Score: 0

### Question 13
No, the answer is incorrect.

Score: 0
Given, expected duration of project = 250 days, variance = 16 days. What is the probability of completing the project within 242 to 254 days?

a. 0.92
b. 0.81
c. 0.62
d. 0.40

No, the answer is incorrect.
Score: 0
Accepted Answers:
(b)

14)
Given, expected duration of project = 100 days, variance = 25 days. What is the probability of the project will be completed within 110 days?

a. 78 percent
b. 68 percent
c. 98 percent
d. 48 percent

No, the answer is incorrect.
Score: 0
Accepted Answers:
(c)
The network showing a project which has two paths: 1,2,3,6,7 and 1,4,5,7

The project details are given in the table below

<table>
<thead>
<tr>
<th>Alternate</th>
<th>Normal time</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>1,4</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>2,3</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>4,5</td>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>3,6</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>5,7</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>6,7</td>
<td>40</td>
<td>2</td>
</tr>
</tbody>
</table>

What will be the probability that both the paths will be completed within 120 days.

a. 20%
   (a)

b. 34%
   (b)

c. 49%
   (c)

d. 97%
   (d)

*No, the answer is incorrect.*

*Score: 0*

*Accepted Answers:*

(c)