**Chapter 3 Supplement: Project Management**

**Test Bank**

**Multiple Choice**

1. According to the operations profile at the beginning of Supplement 3, Manchester in England \_\_\_\_\_\_.

a. is the smallest city in England

b. has a population of nearly 2 million people in the metro and surrounding areas

c. has one of the busiest airports in England

d. is best known for its bobsled team

Ans: C

Cognitive Domain: Knowledge (Remember)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Operations Profile: Fast Tracking Manchester’s New Airport Development

Difficulty Level: Easy

AACSB: Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing, and distribution

2. Which of the following is NOT one of the types of probabilistic estimates used in PERT?

a. optimistic

b. historical

c. most likely

d. pessimistic

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Easy

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

3. The formula for the expected duration of an activity under these circumstances is \_\_\_\_\_\_.

a. (*a* + 4*m* + *b*)/6

b. (*a* + 2*m* + *b*)/6

c. (*a* + 4*m* + *b*)/3

d. (*a* + 2*m* + *b*)/3

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

4. In the formula for the expected duration of an activity, \_\_\_\_\_\_.

a. *b* represents the historical time to complete the activity

b. *c* represents the most pessimistic time to complete the activity

c. *a* represents the most optimistic time to complete the activity

d. *a* represents the most pessimistic time to complete the activity

Ans: A

Cognitive Domain: 1. Calculate the probability of a project being completed on time.

Learning Objective: 3s-Application (Apply)

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Hard

AACSB:

5. The formula for the variance of the duration of an activity is \_\_\_\_\_\_.

a. the square root of [1/6(*b* – *a*)]

b. [1/6(a – b)] raised to the power of 2

c. [1/6(*b* – *a*)] raised to the power of 2

d. the square root of [1/6(a – b)]

Ans: C

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

6. If the most optimistic and pessimistic times for a task are 3 and 11 days respectively, then the variance for the duration of the activity \_\_\_\_\_\_.

a. = (3 – 11) / 6) raised to 2

b. = (11 – 3) / 6) raised to 2

c. = (11 – 3) / 3) raised to 2

d. = (3 – 11) / 3) raised to 2

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

7. The variance for a project’s duration is given by \_\_\_\_\_\_.

a. the sum of the variances for all its activities

b. the sum of the variances for all its critical activities

c. the sum of the standard deviations for all its activities

d. the sum of the standard deviations for all its critical activities

Ans: B

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Easy

AACSB: Analytical thinking (able to analyze and frame problems)

8. A project’s standard deviation is \_\_\_\_\_\_.

a. the square of the project’s variance

b. the mean of the project’s variance

c. the square root of the project’s variance

d. the mode of the project’s variance

Ans: C

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Easy

AACSB: Analytical thinking (able to analyze and frame problems)

9. Let us say that *x* is an observation, a value, in a sample. Then, the *Z* value for *x* is \_\_\_\_\_\_.

a. the number of standard deviations *x* lies from the sample mode

b. the number of variances *x* lies from the sample mode

c. the number of standard deviations *x* lies from the sample mean

d. the number of variances *x* lies from the sample mean

Ans: C

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

10. A *Z* value of 0.72 corresponds to \_\_\_\_\_\_.  
(Hint: Use a normal distribution table).

a. a probability of 0.7642

b. a probability of -0.7642

c. an expected value of 0.7642

d. an expected value of -0.7642

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

11. The *Z* value corresponding to a probability of 95% is close to \_\_\_\_\_\_.

a. 1.65

b. 1.95

c. 2.65

d. 2.95

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

12. If the standard deviation is 2.78 and the *Z* value is 1.65, then \_\_\_\_\_\_.

a. the expected date of completion is 34.59 weeks if the due date for project completion is 30 weeks

b. the due date for project completion is 34.59 weeks if the expected date of completion is 30 weeks

c. the due date for project completion is 30 weeks if the expected date of completion is 24.51weeks

d. the due date for project completion is 24.51 weeks if the expected date of completion is 30 weeks

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

13. In calculating the time–cost trade-off combinations for a project’s crash options, the slope for each activity is given by \_\_\_\_\_\_.

a. the ratio of the (crash cost less normal cost) to (normal time less crash time)

b. the ratio of the (normal time less crash time) to (crash cost less normal cost)

c. the product of the (crash cost less normal cost) and (normal time less crash time)

d. the sum of (crash cost less normal cost) and (normal time less crash time)

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

14. An Activity X has a duration of 5 weeks and is budgeted to cost $12,000. The crash time for this activity is 3 weeks and is expected to cost $32,000. The cost slope for Activity X is given by \_\_\_\_\_\_.

a. (32,000 – 12,000) divided by (5 – 3)

b. (5 – 3) divided by (32,000 – 12,000)

c. 32,000 divided by 5

d. 12,000 divided by 3

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

15. If the cost slope for an activity is $10,000 per week, this means \_\_\_\_\_\_.

a. the activity will cost $10,000 for each week that it is accelerated

b. the primary firm will pay the contractor $10,000 for each week that the project is completed ahead of schedule

c. the contractor will have to pay the primary firm $10,000 for each week beyond the expected date of completion

d. the project leader will incur a penalty of $10,000 for each week that the project takes beyond expected date of completion

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

16. Which of the following does NOT correctly pair the terminology used in the earned value management (EVM) method with its description?

a. planned value: a cost estimate of the resources used across the project’s life cycle

b. earned value: the value of the work actually performed to date

c. actual cost of the work performed: the cumulative total cost of completing the project’s work packages

d. budgeted cost at completion: the total budget for a project at its completion

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Calculating a Project’s Earned Value

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

17. Which of the following statements is true in comparing the standard S-curve evaluation with the EVM variance?

a. Unlike the standard S-curve evaluation, the EVM variance is meaningful because it is based not simply on the budget spent but on value earned.

b. Unlike the EVM variance, the standard S-curve evaluation is meaningful because it is based simply on the budget spent.

c. Both the standard S-curve evaluation and the EVM variance are based on the budget spent.

d. Both the standard S-curve evaluation and the EVM variance are based on the value earned.

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Why Use Earned Value?

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

18. Which one of the following is a more serious concern in terms of an adverse variance from budget?

a. a negative variance of $10,000 in budget expenditures

b. a $10,000 shortfall in value earned on the project to date

c. a positive variance of $10,000 in budget expenditures

d. a $10,000 surplus in value earned on the project to date

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Why Use Earned Value?

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

19. Planned value is \_\_\_\_\_\_.

a. the total budget

b. a way to identify the expenditures at any one stage in the project

c. a cost estimate of the budgeted resources scheduled across the project’s life cycle (cumulative baseline)

d. the real budgeted cost, or value, of the work actually performed to date

Ans: C

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Terminology for the EVM Method

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

20. Value generated by a project is \_\_\_\_\_\_.

a. the product of planned expenditures and percentage of tasks completed

b. the ratio of planned expenditures to percentage of tasks completed

c. the sum of planned expenditures divided by number of tasks scheduled for completion

d. the ratio of actual expenditures and percentage of tasks scheduled for completion

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Terminology for the EVM Method

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

21. The SPI is \_\_\_\_\_\_.

a. the stochastic performance index

b. the ratio of the EV to the PV

c. the basis on which the project will be determined to be successful or not

d. the ratio of project milestones actually met to milestones scheduled to be met

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Terminology for the EVM Method

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

22. Projections about how much the project will finally cost can be calculated based on \_\_\_\_\_\_.

a. the actual cost (AC) of the work performed to date and the earned value (EV) to date

b. the planned cost (PC) of the work performed to date

c. either A or B

d. neither A nor B

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Terminology for the EVM Method

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

23. The cost of the project is given by \_\_\_\_\_\_.

a. multiplying the project’s original budget by the reciprocal of the CPI

b. multiplying the project’s original budget by the CPI

c. adding the project’s original budget to the reciprocal of the CPI

d. adding the project’s original budget to the CPI

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Example 3S.2: Assessing a Project’s Earned Value

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

24. In calculating the probability of a project being completed on time, applying the relevant formulas for expected time and variance allows us to calculate \_\_\_\_\_\_.

a. the most likely time for each activity

b. the expected cost for the project

c. the actual cost for the project

d. the start date for the project

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

25. In project management, PERT (program evaluation and review technique) \_\_\_\_\_\_.

a. uses a weighted average of optimistic, pessimistic, and most likely estimates to calculate the expected duration for an activity

b. uses a deterministic approach to calculate the expected duration for an activity

c. use a simple average of optimistic, pessimistic, and most likely estimate to calculate the expected duration for an activity

d. uses a most likely estimate to calculate the expected duration for an activity

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

26. If a project has an expected completion time of 15 weeks with a variance of 4 weeks, the probability that the project will be completed in 12 weeks is \_\_\_\_\_\_.

a. about 6.7%

b. about 43.3%

c. about 29.1%

d. about 54.3%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

27. If a project has an expected completion time of 15 weeks with a variance of 4 weeks, the probability that the project will be completed in 15 weeks is \_\_\_\_\_\_.

a. close to zero

b. half

c. more than 75%

d. less than 25%

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

28. If a project has an expected completion time of 15 weeks with a variance of 4 weeks, the probability that the project will be completed in 18 weeks is \_\_\_\_\_\_.

a. less than 34%

b. between 44% and 68%

c. between 69% and 83%

d. more than 93%

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

29. If a project has an expected completion time of 15 weeks with a variance of 4 weeks, there is a 95% likelihood that the project will be completed by what time?

a. by 17.5 weeks

b. by 16.5 weeks

c. by 15.5 weeks

d. by 14.5 weeks

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

30. If a project is expected to be completed in 68 days with a project variance of 21 days, what is the probability that the project will be completed within 50 days?

a. less than 1%

b. between 5% and 10%

c. between 15% and 30%

d. over 35%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

31. If a project is expected to be completed in 68 days with a project variance of 21 days, what is the probability that the project will be completed within 90 days?

a. between 5% and 10%

b. between 15% and 20%

c. between 25% and 30%

d. none of these

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

32. If a project is expected to be completed in 68 days with a project variance of 21 days, what is the probability that the project will be completed within 70 days?

a. between 35% and 40%

b. between 45% and 50%

c. between 55% and 60%

d. between 65% and 70%

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

33. If a project is expected to be completed in 68 days with a project variance of 21 days, what due date will give us a 99% likelihood of project completion?

a. in 75 days

b. in 77 days

c. in 79 days

d. in 81 days

Ans: C

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

34. If a project is expected to be completed in 68 days with a project variance of 21 days, what is the probability that the project will be completed within 50 days?

a. 0%

b. 0.39%

c. 50%

d. 100%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

35. If a project is expected to be completed in 68 days with a project variance of 9 days, what is the probability that the project will be completed within 50 days?

a. 0%

b. between 5% and 10%

c. between 15% and 30%

d. over 35%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

36. If a project is expected to be completed in 68 days with a project variance of 9 days, what is the probability that the project will be completed within 70 days?

a. about 45%

b. about 55%

c. about 65%

d. about 75%

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

37. If a project is expected to be completed in 68 days with a project variance of 9 days, what is the probability that the project will be completed within 90 days?

a. 85%

b. 90%

c. 95%

d. 100%

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

38. If a project is expected to be completed in 68 days with a project variance of 9 days, what is the probability that the project will be completed between 63 to 70 days?

a. 100%

b. 95%

c. 90%

d. 70%

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

39. A project’s variance is \_\_\_\_\_\_.

a. the sum of the variances of all of its critical activities

b. the average of the variances of all of its critical activities

c. the maximum of the variances of all of its critical activities

d. the minimum of the variances of all of its critical activities

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

40. The probability that a project will be completed within a specified period of time can be calculated using the standard normal equation, which is \_\_\_\_\_\_.

a. (due date – expected date of completion) / the project’s standard deviation

b. (expected date of completion – due date) / the project’s standard deviation

c. the project’s standard deviation / (due date – expected date of completion)

d. the project’s standard deviation / (expected date of completion – due date)

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

41. If project completion times are normally distributed, then which of the following statements is FALSE?

a. The due date of a project is to the left of the mean.

b. The mean of project completion times is in the middle of the distribution.

c. There is a 50% chance that the project will be completed before the mean of project completion times.

d. There is a 50% chance that the project will be completed after the mean of project completion times.

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

42. The normal activity duration of Activity X is 5 weeks and is budgeted to cost $12,000. The crash time for this activity is 3 weeks and is expected to cost $32,000. The cost slope for Activity X is calculated as \_\_\_\_\_\_.

a. (32,000 – 12,000) / (5 – 3)

b. (12,000 – 32,000) / (5 - 3)

c. (32,000 – 12,000) / (3 - 5)

d. (12,000 – 32,000) / (3 - 5)

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

43. The normal activity duration of Activity X is 5 weeks and is budgeted to cost $12,000. The crash time for this activity is 3 weeks and is expected to cost $32,000. The cost slope for Activity X is \_\_\_\_\_\_.

a. $32,000 per week

b. $18,000 per week

c. $20,000 per week

d. $10,000 per week

Ans: D

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

44. Which of the following is NOT one of the questions we should ask in determining whether an activity should be accelerated?

a. What costs are associated with accelerating other project activities?

b. What are the gains versus losses in accelerating the activity?

c. How will the project manager benefit from crashing the project?

d. Is the activity critical?

Ans: C

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

45. In considering crashing activities, we first want to crash activities that are \_\_\_\_\_\_.

a. the least costly to crash

b. the most costly to crash

c. easiest to crash

d. most difficult to crash

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

46. Which of the following statements is FALSE with regard to costs of crashing activities in a project?

a. As each project activity is crashed in order, the overall project budget increases.

b. It is usually necessary to crash all activities in a project.

c. Crashing additional activities beyond a point merely adds costs to the budget.

d. It may not be possible to crash all activities in a project.

Ans: B

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

47. In establishing the project’s baseline, the time-phased budget \_\_\_\_\_\_.

a. allows us to identify the correct sequencing of tasks

b. enables the project team to determine the points in the project when actual costs are likely to exceed budgeted costs

c. identifies the individual work packages and tasks necessary to complete the project

d. provides the managerial responsibilities for tasks in a project

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

48. A project’s baseline represents \_\_\_\_\_\_.

a. our best understanding of how the project should progress

b. how the project actually progresses

c. the costs actually incurred in a project

d. the costs budgeted for a project

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-2. Calculate the cost of “crashing” a project and the amount of time a project can be accelerated.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Hard

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

49. An activity was given a planned budget of $10,000. If 80% of that activity was completed, what was the resulting value?

a. $80,000

b. $8,000

c. $800

d. $80

Ans: B

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-3. Calculate the earned value of an ongoing project to assess its current status throughout development.

Answer Location: Figure 3S.2: Completed Activity Network for Project Eagle With the Critical Path Highlighted

Difficulty Level: Easy

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

50. If the most optimistic and pessimistic times for a task are 6 and 21 days respectively, then the variance for the duration of the activity is \_\_\_\_\_\_.

a. 5.25

b. 6.25

c. 7.25

d. 8.25

Ans: B

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Easy

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

51. If the most optimistic and pessimistic times for a task are 3 and 15 days respectively, then the variance for the duration of the activity is \_\_\_\_\_\_.

a. 3.00

b. 4.00

c. 5.00

d. 6.00

Ans: B

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Easy

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

52. The most pessimistic time for a task is 28 days. The most optimistic time for the same task is one fourth of the pessimistic time. Calculate the variance for the duration of the activity.

a. 8.75

b. 12.25

c. 14.85

d. 10.50

Ans: B

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Easy

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

53. The most pessimistic time for a task is 9 months. The most optimistic time for the same task is 7 months. What is the variance, in months, for the duration of the activity?

a. 0.01

b. 0.11

c. 1.01

d. 2.31

Ans: B

Cognitive Domain: Analysis (Analyze)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Easy

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

54. Find the area under the normal curve between the *Z* values 0.78 and 1.63.

a. 16.61%

b. 50.12%

c. 8.43%

d. 21.44%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

55. Find the area under the normal curve between the *Z* values 0.19 and 2.98.

a. 42.32%

b. 17.33%

c. 26.53%

d. 69.23%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

56. Find the area under the normal curve between the *Z* values 0.01 and 2.5.

a. 48.98%

b. 42.32%

c. 17.33%

d. 26.53%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

57. Find the area under the normal curve between the *Z* values 1 and 0.83.

a. 4.46%

b. 5.98%

c. 2.32%

d. 7.33%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

58. Find the area under the normal curve between the *Z* values 0.17 and 3.81.

a. 43.24%

b. 14.46%

c. 15.98%

d. 12.32%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

59. Find the area under the normal curve between the *Z* values 0.99 and 2.63.

a. 15.68%

b. 13.24%

c. 14.46%

d. 19.80%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

60. Find the area under the normal curve between the *Z* values 0.37 and 0.51.

a. 5.07%

b. 4.10%

c. 17.23%

d. 19.99%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

61. Find the area under the normal curve between the *Z* values 0.89 and 2.14.

a. 17.06%

b. 14.99%

c. 18.23%

d. 42.30%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

62. Find the area under the normal curve between the *Z* values 0.4 and 0.53.

a. 4.65%

b. 5.07%

c. 13.10%

d. 21.10%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

63. Find the area under the normal curve between the *Z* values 0.05 and 2.03.

a. 45.89%

b. 47.88%

c. 1.99%

d. 15.87%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

64. Find the area under the normal curve between the *Z* values 0.16 and 2.88.

a. 43.45%

b. 14.99%

c. 18.23%

d. 42.30%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

65. Find the area under the normal curve between the *Z* values 0.65 and 2.07.

a. 23.86%

b. 18.11%

c. 29.72%

d. 31.44%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

66. Find the area under the normal curve between the *Z* values 0.94 and 0.73.

a. 5.91%

b. 15.22%

c. 23.32%

d. 33.69%

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

67. If the standard deviation is 2.7, the *Z* value is 1.65, and the expected date of completion is 27 weeks, then the due date for project completion is \_\_\_\_\_\_.

a. 31.46 weeks

b. 22.55 weeks

c. 32.35 weeks

d. 46.45 weeks

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

68. If the standard deviation is 3.5, the *Z* value is 1.0, and the expected date of completion is 30 weeks, then the due date for project completion is \_\_\_\_\_\_.

a. 33.5 weeks

b. 41.5 weeks

c. 21.95 weeks

d. 38.55 weeks

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

69. If the standard deviation is 4.5, the *Z* value is 1.25, and the expected date of completion is 18 weeks, then the due date for project completion is \_\_\_\_\_\_.

a. 23.625 weeks

b. 40.625 weeks

c. 12.375 weeks

d. 18.575 weeks

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

70. If the standard deviation is 6.5, the *Z* value is 1.5, and the expected date of completion is 15 weeks, then the due date for project completion is \_\_\_\_\_\_.

a. 24.75 weeks

b. 22.75 weeks

c. 29.75 weeks

d. 14.75 weeks

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

71. If the standard deviation is 1.9, the *Z* value is 1.65, and the expected date of completion is 25 months, then the due date for project completion is \_\_\_\_\_\_.

a. 28.135 months

b. 26.665 months

c. 32.455 months

d. 18.155 months

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

72. If the standard deviation is 3.4, the *Z* value is 1.95, and the expected date of completion is 38 months, then the due date for project completion is \_\_\_\_\_\_.

a. 44.63 months

b. 62.78 months

c. 32.55 months

d. 24.50 months

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

73. If the standard deviation is 6.2, the *Z* value is 2.00, and the expected date of completion is 33 months, then the due date for project completion is \_\_\_\_\_\_.

a. 45.40 months

b. 35.75 months

c. 29.65 months

d. 39.55 months

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

74. If the most optimistic time for completing an activity is 3, the most likely time is 4, and the most pessimistic time is 11, then the estimated time for the activity is \_\_\_\_\_\_.

a. 5

b. 4

c. 6

d. 9

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

75. If the most optimistic time for completing an activity is 2, the most likely time is 5, and the most pessimistic time is 8, then the estimated time for the activity is \_\_\_\_\_\_.

a. 5

b. 9

c. 11

d. 4

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

76. If the most optimistic time for completing an activity is 3, the most likely time is 6, and the most pessimistic time is 9, then the estimated time for the activity is \_\_\_\_\_\_.

a. 6

b. 3

c. 8

d. 21

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

77. If the most optimistic time for completing an activity is 8, the most likely time is 12, and the most pessimistic time is 20, then the estimated time for the activity is \_\_\_\_\_\_.

a. 12.7

b. 14.9

c. 18.2

d. 6.7

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

78. If the most optimistic time for completing an activity is 3, the most likely time is 5, and the most pessimistic time is 12, then the estimated time for the activity is \_\_\_\_\_\_.

a. 5.83

b. 6.42

c. 10.58

d. 9.11

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

79. If the most optimistic time for completing an activity is 2, the most likely time is 4, and the most pessimistic time is 7, then the estimated time for the activity is \_\_\_\_\_\_.

a. 4.17

b. 10.58

c. 5.83

d. 6.42

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

80. If the most optimistic time for completing an activity is 6, the most likely time is 9, and the most pessimistic time is 14, then the estimated time for the activity is \_\_\_\_\_\_.

a. 9.33

b. 11.63

c. 12.38

d. 9.54

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

81. If the most optimistic time for completing an activity is 1, the most likely time is 2, and the most pessimistic time is 4, then the estimated time for the activity is \_\_\_\_\_\_.

a. 2.17

b. 3.63

c. 5.38

d. 9.44

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

82. If the most optimistic time for completing an activity is 14, the most likely time is 16, and the most pessimistic time is 30, then the estimated time for the activity is \_\_\_\_\_\_.

a. 18

b. 19

c. 20

d. 21

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

83. If the most optimistic time for completing an activity is 17, the most likely time is 19, and the most pessimistic time is 33, then the estimated time for the activity is \_\_\_\_\_\_.

a. 21

b. 19

c. 34

d. 17

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

84. If the most optimistic time for completing an activity is 20, the most likely time is 22, and the most pessimistic time is 36, then the estimated time for the activity is \_\_\_\_\_\_.

a. 24

b. 34

c. 12

d. 29

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)

85. If the most optimistic time for completing an activity is 23, the most likely time is 25, and the most pessimistic time is 39, then the estimated time for the activity is \_\_\_\_\_\_.

a. 27

b. 39

c. 42

d. 17

Ans: A

Cognitive Domain: Application (Apply)

Learning Objective: 3s-1. Calculate the probability of a project being completed on time.

Answer Location: Determining the Probability of a Project Being Completed on Time

Difficulty Level: Medium

AACSB: Application of knowledge (able to translate knowledge of business and management into practice)