

CCEA Sample Questions – May 2009

Below are two sample questions with associated answers and solutions for sections A through C.

FOUNDATIONAL KNOWLEDGE SAMPLE QUESTION #1

[Cost Estimating Basics] (Work Breakdown Structure)

QUESTION: Which of the following is **NOT** a purpose of the Work Breakdown Structure?

- a. To provide a lower level breakout of small tasks that are easy to identify, staff, schedule, and estimate
- b. To identify the organizational relationships and assign work responsibilities
- c. To reduce the possibility of overlap, duplication, or redundancy of tasks
- d. To provide a basis of comparison for the actual work completed versus the estimate.
- e. To furnish a convenient hierarchical structure for the accumulation of resources estimates

ANSWER: B

SOLUTION: All of the provided responses support the purpose of the WBS except response B.

REFERENCE: Stewart, Rodney. Cost Estimating: Second Edition. New York: John Wiley & Sons, Inc., 1991, p 35.

FOUNDATIONAL KNOWLEDGE SAMPLE QUESTION #2

[Learning Curve]: (Unit Learning Curve)

QUESTION: The following example uses which type of LC theory to determine cost?

Unit Number (X)	Unit Cost (Y)
1	\$100.00
2	80.00
4	64.00
8	51.20
16	40.96

- a. Wright (Cum Ave)
- b. Crawford (Unit)
- c. Heuristic Lot Midpoint
- d. Andelohr (Production Break)
- e. Straight-line deductions

ANSWER: B

SOLUTION: By definition

REFERENCE: By definition

PRACTICAL APPLICATION SAMPLE QUESTION #1

[Data Collection and Normalization]: (Reasonableness of Data-Data Quality)

QUESTION: While collecting historical data to perform an estimate for a future aircraft, you discover that the ABC aircraft is similar to the proposed aircraft. You find that the ABC aircraft cost \$2.2 billion (2007\$) to develop, has an average recurring production cost of \$90 million (2007\$), weighs 30,000 lbs, and has a range of 2000 miles and maximum speed of 550 miles per hour. What major category of data is missing from this collection effort?

- a. Cost
- b. Technical
- c. Programmatic
- d. None of the above
- e. All of the above

ANSWER: C

SOLUTION: *Using the various terms addressed in Module 4 of CEBok, programmatic is the best category for the missing data*

REFERENCE: Module 4 of CEBok

PRACTICAL APPLICATION SAMPLE QUESTION #2

[Basic Data Analysis Principles] : (Standard Deviation)

QUESTION: Given the following information and a sample mean of 2000, what is the sample standard deviation for monthly salary?

Employee	Monthly Salary
Abe	1500
Bob	1700
Cindy	2500
Doug	1450
Ellen	1250

- a. 434.2
- b. 485.5
- c. 971.1
- d. 1680
- e. 0

ANSWER: B
SOLUTION:

Sample Data	Sample Mean	Delta	Delta Squared
1500	1680	180	32400
1700	1680	-20	400
2500	1680	-820	672400
1450	1680	230	52900
1250	1680	430	184900

Sample Mean=
1680

Differences Summed
943000

Sum divided by
n-1
235750

485.5409355

standard deviation of sample

Verified by
Excel

485.5409355

REFERENCE: (Submitted by Exam Committee)

ADVANCED ANALYSIS SAMPLE QUESTION #1

[Data Collection and Normalization]: (Data Collection Process)

QUESTION: Which of the following does not have the potential to impact the data collection process?

- a. New technologies
- b. Schedule
- c. Cost Reduction Initiatives
- d. Inflation
- e. Development of a new CER

ANSWER: D

SOLUTION: Inflation doesn't impact the method of collection

REFERENCE: Module 4 of CEBoK

ADVANCED ANALYSIS SAMPLE QUESTION #2

[Economic Analysis]: (Real Interest Rate)

QUESTION: Suppose the nominal interest rate is 9.0%. The rate of inflation is 6.0%. The real interest rate is approximately:

- a. 3.0%
- b. 1.5%
- c. -3.0%
- d. 15.0%
- e. Unknown

ANSWER: A

SOLUTION: The real interest rate is approximately the nominal rate of interest minus the rate of inflation.

REFERENCE: (Submitted by Committee)

CASE STUDY SAMPLE QUESTIONS

Because the questions within the Case Study section are related to the associated case study and reference material, we cannot provide you sample questions for this section. The premise of the case study states that you are a senior cost estimator who must review the work of a junior cost estimator. The Case Study will be approximately 15 pages in length to describe the requirements, and contextual information that will be pertinent to answer the case questions. Within this section you will be given information and required to judge and assess the work of the junior analyst.