



DEFENSE ACQUISITION UNIVERSITY EMPLOYEE SELF-ASSESSMENT

BCF 106 - Fundamentals of Cost Analysis

Note:

- Provide a justification(s) package referencing the numbered outcomes as appropriate on separate paper.
- Only the numbered outcomes (bold font) need to be addressed.
- The enablers (indented if specified) are provided to ensure the outcome is sufficiently addressed.
- The **Achieved** column is for use by the initial (functional) evaluator.
- Attach this guide with the justification to the DD form 2518 for a complete package.

150205

| Outcomes and Enablers | | Achieved? | |
|------------------------------|---|------------------|-----------|
| | | Yes | No |
| 1 | Discuss the people, processes, and products associated with life cycle cost estimating within the Department of Defense | | |
| | List and define the elements of a life cycle cost estimate. | | |
| | Describe the purpose of various life cycle cost estimates (POE, CCA, SCP, ICE) and the organization responsible for each estimate. | | |
| | Discuss the cost estimating process; to include the Cost Analysis Requirements Description (CARD), work breakdown structures (WBS) and cost element structures (CES), and the various methodologies used for cost estimating. | | |
| 2 | Discuss the uses of expert opinion, cost factors, and analogies. | | |
| | Discuss the uses of expert opinion and the techniques used to interview experts. | | |
| | Discuss the procedures and techniques involved in the development and application of cost factors | | |
| | Discuss the procedures and techniques involved in the development of an analogy. | | |
| 3 | Describe a functional cost breakdown structure that allocates costs using categories such as manufacturing and engineering, labor and materials, and direct and indirect. | | |
| | Compare and contrast direct and indirect costs. | | |
| | Describe and define the categories of labor and materials costs. | | |
| | Describe other elements of cost which include: (1) other direct costs; (2) general and administrative costs; (3) cost of money; and (4) profit or fee. | | |
| 4 | Determine the proper use of DoD inflation indices. | | |
| | Discuss the concept of inflation and inflation indices. | | |
| | Define inflation terminology such as base year, constant year, then year, and the raw, compound, composite, and weighted inflation indices. | | |
| | Convert a dollar value from one base to another using the correct indices and operations. | | |
| 5 | Develop descriptive and inferential statistics from one variable data. | | |
| | Define and calculate the measures of central tendency (i.e. the mean, median, and mode). | | |
| | Define and calculate the measures of dispersion (i.e. the range, variance, standard deviation, and coefficient of variation). | | |
| | Determine an area of probability under a normal distribution. | | |
| | Calculate confidence intervals for both small and large sample sizes | | |
| | Perform one-tailed and two-tailed hypothesis tests | | |
| 6 | Discuss and apply linear and nonlinear regression techniques. | | |
| | Calculate the coefficients for a linear equation. | | |
| | Interpret and apply a linear equation. | | |
| | Calculate and explain the coefficient of determination. | | |
| | Calculate and explain the standard error and the coefficient of variation. | | |
| | Determine the statistical significance of an equation. | | |
| | Discuss the development and use of a log linear (power) equation. | | |
| | Compare and contrast the statistics of a linear and log linear equation. | | |
| 7 | Discuss the use of learning curves in forecasting recurring production costs. | | |
| | Describe the concept of a learning curve or what we might call cost improvement. | | |



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| | Calculate and interpret the components of the unit learning curve equation. | | |
| | Develop the equation of a learning curve from a data set. | | |
| | Calculate the cost of a unit using the unit learning curve formulation. | | |
| | Calculate the total cost or average cost of a lot using a unit formulation table. | | |
| 8 | Discuss the means of identifying and quantifying the risk associated with a program estimate. | | |
| | Describe risk and the process of risk management. | | |
| | Describe and perform a Sensitivity Analysis. | | |
| | Describe and perform a Symmetric Approximation. | | |
| | Describe the Monte Carlo Simulation and compare it to other approaches. | | |
| 9 | Discuss the guidance and terminology associated with time phasing an estimate. | | |
| | Describe the process of developing a budget plan. | | |
| | Explain the general appropriation principles such as incremental funding, full funding, and annual funding. | | |
| | Discuss some of the special funding issues such as multi-year procurement, low rate initial production, and product improvement. | | |
| 10 | Define the concept of an Economic Analysis within the Department of Defense. | | |
| | Explain the concept of discounting, including the construction of discount factors | | |
| | Describe the EA process and associated terminology. | | |
| | Develop a cash flow diagram (CFD) for an alternative. | | |
| | Determine the NPV of a cash flow | | |
| | Calculate the Uniform Annual Cost of a cash flow. | | |
| 11 | Discuss various procurement approaches and their impact on the final price of a good or service. | | |
| | Describe the considerations for determining the contract type. | | |
| | Compare and contrast different contracting arrangements. | | |
| | Determine the share ratio and the final price under an incentive contract arrangement | | |