

Q1: The Importance of Project Cost Management

Answer:

- ▶ IT projects have a poor track record for meeting budget goals
- .....

Q2: **A cost overrun is**

Answer:

- ▶ the additional percentage or dollar amount by which actual costs exceed estimates
- .....

Q3: Cost is

Answer:

- ▶ **a resource sacrificed or foregone to achieve a specific objective or something given up in exchange**
- .....

Q4: why Project cost management includes the processes required

Answer:

- ▶ to ensure that the project is completed within an approved budget
- .....

Q5: Project Cost Management Processes

Answer:

1. Planning cost management
  2. Estimating costs
  3. Determining the budget
  4. Controlling costs
- .....

Q6: Planning cost management

Answer:

- ▶ determining the policies, procedures, and documentation that will be used for planning, executing, and controlling project cost.
- .....

Q7: Estimating costs

Answer:

- ▶ developing an approximation or estimate of the costs of the resources needed to complete a project
- .....

Q8: Determining the budget

Answer:

- ▶ allocating the overall cost estimate to individual work items to establish a baseline for measuring performance

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Q9: Controlling costs

Answer:

- ▶ controlling changes to the project budget

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Q10: **Project Cost Management Summary**

Answer:

1. Planning
2. Monitoring and Controlling

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Q11: Planning

Answer:

- ▶ Process: Plan cost management
- ▶ Outputs: Cost management plan Estimate costs
- ▶ Process: Estimate costs
- ▶ Outputs: Activity cost estimates, basis of estimates, project documents updates
- ▶ Process: Determine budget
- ▶ Outputs: Cost baseline, project funding requirements, project documents updates

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Q12: Monitoring and Controlling

Answer:

- ▶ Process: Control costs
- ▶ Outputs: Work performance information, cost forecasts, change requests, project management plan updates, project documents updates, organizational process assets updates

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Q13: Why IT project managers should speak the language of executive board members

Answer:

- ▶ Because Most members of an executive board better understand and are more interested in financial terms than IT terms
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Q14: Profits are

Answer:

- ▶ revenues minus expenditures
- .....

Q15: Profit margin is

Answer:

- ▶ the ratio of revenues to profits
- .....

Q16: **Life cycle costing**

Answer:

- ▶ considers the total cost of ownership, or development plus support costs, for a project
- .....

Q17: **Cash flow analysis**

Answer:

- ▶ determines the estimated annual costs and benefits for a project and the resulting annual cash flow.
- .....

Q18: Note **Media Snapshot**

Answer:

- ▶ You cannot measure ROI unless you have a benefits measurement process in place
- .....

Q19: **Types of Costs and Benefits**

Answer:

1. Tangible costs or benefits
2. Intangible costs or benefits
3. Direct costs

4. Indirect costs
5. Sunk cost

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Q20: Tangible costs or benefits

Answer:

- ▶ are those costs or benefits that an organization can easily measure in dollars ...
- .....

Q21: Intangible costs or benefits

Answer:

- ▶ are costs or benefits that are difficult to measure in monetary terms
- .....

Q22: Direct costs

Answer:

- ▶ are costs that can be directly related to producing the products and services of the project
- .....

Q23: **Indirect costs**

Answer:

- ▶ are costs that are not directly related to the products or services of the project, but are indirectly related to performing the project
- .....

Q24: **Sunk cost**

Answer:

- ▶ is money that has been spent in the past; when deciding what projects to invest in or continue, you should not include sunk costs
- .....

Q25: **Learning curve theory**

Answer:

- ▶ states that when many items are produced repetitively, the unit cost of those items decreases in a regular pattern as more units are produced
- .....

Q26: Reserves

Answer:

- ▶ are dollars included in a cost estimate to mitigate cost risk by allowing for future situations that are difficult to predict

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Q27: Contingency reserves

Answer:

- ▶ allow for future situations that may be partially planned for (sometimes called known unknowns) and are included in the project cost baseline

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Q28: Management reserves

Answer:

- ▶ allow for future situations that are unpredictable (sometimes called unknown unknowns)

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Q29: why The project team uses expert judgment, analytical techniques, and meetings

Answer:

- ▶ to develop the cost management plan

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Q30: A cost management plan includes:

Answer:

1. Level of accuracy and units of measure
2. Organizational procedure links
3. Control thresholds
4. Rules of performance measurement
5. Reporting formats
6. Process descriptions

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Q31: **Estimating Costs**

Answer:

- ▶ Project managers must take cost estimates seriously if they want to complete projects within budget constraints
- ▶ It's important to know the types of cost estimates, how to prepare cost estimates, and typical problems associated with IT cost estimates

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### Q32: Types of Cost Estimates

Answer:

| TYPE OF ESTIMATE                      | WHEN DONE   | WHY DONE   | HOW ACCURATE  |
|---------------------------------------|---|--|---------------|
| <b>Rough Order of Magnitude (ROM)</b> | Very early in the project life cycle, often 3–5 years before project completion | Provides estimate of cost for selection decisions      | –50% to +100% |
| <b>Budgetary</b>                      | Early, 1–2 years out  | Puts dollars in the budget plans                       | –10% to +25%  |
| <b>Definitive</b>                     | Later in the project, less than 1 year out                                      | Provides details for purchases, estimates actual costs | –5% to +10%   |

### Q33: Note More on Cost Estimates

Answer:

- ▶ The number and type of cost estimates vary by application area.
- ▶ Estimates are usually done at various stages of a project and should become more accurate as time progresses
- ▶ A large percentage of total project costs are often labor costs

### Q34: Basic tools and techniques for cost estimates:

Answer:

1. Analogous or top-down estimates
2. Bottom-up estimates
3. Parametric modeling

### Q35: Analogous or top-down estimates

Answer:

- ▶ use the actual cost of a previous, similar project as the basis for estimating the cost of the current project

### Q36: Bottom-up estimates

Answer:

- ▶ involve estimating individual work items or activities and summing them to get a project total

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#### Q37: Parametric modeling

Answer:

- ▶ uses project characteristics (parameters) in a mathematical model to estimate project costs

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#### Q38: Typical Problems with IT Cost Estimates

Answer:

1. Estimates are done too quickly
2. People lack estimating experience
3. Human beings are biased toward underestimation
4. Management desires accuracy

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#### Q39: Sample Cost Estimate

Answer:

1. See the text for a detailed example of creating a cost estimate for the Surveyor Pro project described in the opening case
2. Before creating an estimate, know what it will be used for, gather as much information as possible, and clarify the ground rules and assumptions for the estimate
3. If possible, estimate costs by major WBS categories
4. Create a cost model to make it easy to make changes to and document the estimate

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#### Q40: Note Determining the Budget

Answer:

- ▶ Cost budgeting involves allocating the project cost estimate to individual work items over time
- ▶ The WBS is a required input to the cost budgeting process since it defines the work items
- ▶ Important goal is to produce a cost baseline
- ▶ a time-phased budget that project managers use to measure and monitor cost performance

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Q41: Project cost control includes

Answer:

1. Monitoring cost performance
2. Ensuring that only appropriate project changes are included in a revised cost baseline
3. Informing project stakeholders of authorized changes to the project that will affect costs
  - ▶ Many organizations around the globe have problems with cost control

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Q42: Earned Value Management (EVM)

Answer:

- ▶ is a project performance measurement technique that integrates scope, time, and cost data

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Q43: how you can determine how well the project is meeting its goals

Answer:

- ▶ Given a baseline (original plan plus approved changes)

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Q44: Note Earned Value Management (EVM)

Answer:

- ▶ You must enter actual information periodically to use EVM
- ▶ More and more organizations around the world are using EVM to help control project costs

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Q45: Earned Value Management Terms

Answer:

1. The planned value (PV),
2. Actual cost (AC)
3. The earned value (EV)
4. EV is based on the original planned costs for the project or activity and the rate at which the team is completing work on the project or activity to date

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Q46: The planned value (PV)

Answer:



- ▶ formerly called the budgeted cost of work scheduled (BCWS), also called the budget, is that portion of the approved total cost estimate planned to be spent on an activity during a given period
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Q47: Actual cost (AC)

Answer:

- ▶ formerly called actual cost of work performed (ACWP), is the total of direct and indirect costs incurred in accomplishing work on an activity during a given period
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Q48: The earned value (EV)

Answer:

- ▶ formerly called the budgeted cost of work performed (BCWP), is an estimate of the value of the physical work actually completed
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Q49: Rate of performance (RP)

Answer:

- ▶ is the ratio of actual work completed to the percentage of work planned to have been completed at any given time during the life of the project or activity
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Q50: Who suggested to estimate the earned value

Answer:

- ▶ Brenda Taylor, Senior Project Manager in South Africa, suggests this term and approach for estimating earned value
  - ▶ For example, suppose the server installation was halfway completed by the end of week 1. The rate of performance would be 50% because by the end of week 1, the planned schedule reflects that the task should be 100 percent complete and only 50 percent of that work has been completed
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## Q51: Earned Value Formulas

Answer:

| Term                             | Formula                        |
|----------------------------------|--------------------------------|
| Earned value (EV)                | $EV = PV \text{ to date} * RP$ |
| Cost variance (CV)               | $CV = EV - AC$                 |
| Schedule variance (SV)           | $SV = EV - PV$                 |
| Cost performance index (CPI)     | $CPI = EV/AC$                  |
| Schedule performance index (SPI) | $SPI = EV/PV$                  |
| Estimate at completion (EAC)     | $EAC = BAC/CPI$                |
| Estimated time to complete       | Original time estimate/SPI     |

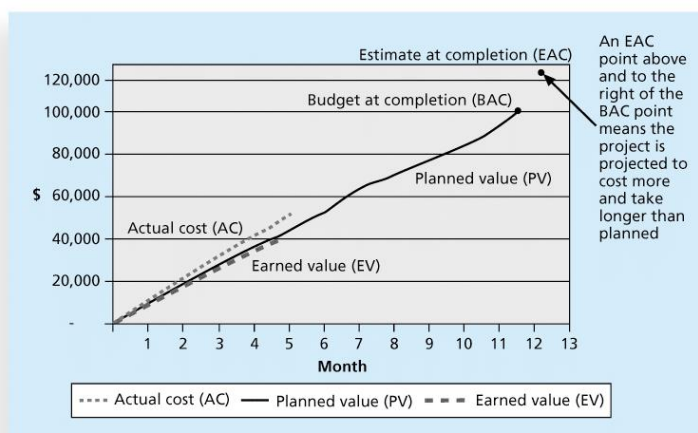
## Q52: Rules of Thumb for Earned Value Numbers

Answer:

- ▶ Negative numbers for cost and schedule variance indicate problems in those areas
- ▶ CPI and SPI less than 100% indicate problems
- ▶ Problems mean the project is costing more than planned (over budget) or taking longer than planned (behind schedule)
- ▶ The CPI can be used to calculate the **estimate at completion (EAC)**—an estimate of what it will cost to complete the project based on performance to date. The **budget at completion (BAC)** is the original total budget for the project

## Q53: Earned Value Chart for Project after Five Months

Answer:



Q54: Five levels for project portfolio management

Answer:

1. Put all your projects in one database
2. Prioritize the projects in your database
3. Divide your projects into two or three budgets based on type of investment
4. Automate the repository
5. Apply modern portfolio theory, including risk-return tools that map project risk on a curve

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**Q55: Using Software to Assist in Cost Management**

Answer:

- ▶ Spreadsheets are a common tool for resource planning, cost estimating, cost budgeting, and cost control
- ▶ Many companies use more sophisticated and centralized financial applications software for cost information
- ▶ Project management software has many cost-related features, especially enterprise PM software
- ▶ Portfolio management software can help reduce costs