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# King Saud University

**Information Systems Department**

Project Management (IS-351)

# Class Quiz # 3 (ANSWERS)

Section-I

|  |  |
| --- | --- |
| **Student Name:-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Section:-\_\_\_\_\_\_\_** |
| **SID No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Student Class No.: \_\_\_\_\_\_\_\_** |
| **Total Marks:- 10** | **Marks Awarded:\_\_\_\_\_\_\_\_\_\_** |

=========================================================================

**Question 1:** Using the formulas given in table-1, if needed, solve the given problem (6 points)

Table-1:

|  |  |
| --- | --- |
| Planned value ( PV ) |  |
| Actual Cost ( AC ) |  |
| Earned value ( EV ) | EV = PV up to date \* percent completed |
| 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 (for cost) |
| Estimated time for project completion | Scheduled Time of project / SPI |

**The problem:**

**Given for a (5 months) project, the following data:**

**PV = $ 12,000**

**EV = $10,000**

**AC = $11,000**

**BAC = $20,000**

**1. a) How is this project performing? (1 point)**

**[a]** This project is ***under budgeted*** & ***behind schedule*** .

[b] This project is ***under budgeted*** & ***ahead of schedule***.

[c] This project is ***over budgeted*** & ***ahead of schedule*.**

**[d]** This project is ***over budgeted*** & ***behind schedule*.**

**Answer: Circle the correct choice**

**The Correct Choice is**

|  |  |  |  |
| --- | --- | --- | --- |
| **[a]** | **[b]** | **[c]** | **[d]** |

1. **b) Calculate the value of CV (1 point)**

**CV = EV – AC = 10,000 -11,000 = -$1,000.**

1. **c) Calculate the value of SV (1 point)**

**SV = EV – PV = 10,000 -12,000 = -$2,000.**

1. **d) Calculate the value of CPI (1 point)**

**CPI = EV/AC = 10,000 / 11,000 = 10/11 less than 1 🡺 over budgeted.**

1. **e) Calculate the value of SPI (1 point)**

**SPI = EV/ PV = 10,000 / 12,000 = 5 / 6 less than 1 🡺behind Schedule.**

**1. f) The estimated time to complete the project: (1 point)**

**[a] *5 months*** as planned ***would suffice*** .

[b] ***4 months*** ***only because it is ahead of schedule***.

[c] ***6 months*** ***would suffice***

**[d]** ***None of the above***

**Answer: Circle the correct choice**

**The Correct Choice is**

|  |  |  |  |
| --- | --- | --- | --- |
| **[a]** | **[b]** | **[c]** | **[d]** |

**Question 2:** Read each of the following statements, then fill in the entries of table -2 by writing (true) or (false) in the entries provided. **(2.5 points)**

**Table-2:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Statement** | **Statement a)** | **Statement b)** | **Statement c)** | **Statement d)** | **Statement e)** |
| **ANSWER** | **TRUE** | **FALSE** | **FALSE** | **TRUE** | **TRUE** |

1. **If Cost Variance (CV) is a negative number, it means that performing the work cost more than planned.**
2. **A negative Schedule Variance (SV) means that it took less time than planned to perform the work.**
3. **Cost Performance Index (CPI) is the ratio of earned value to actual cost and is used to estimate the projected time of completing the project.**
4. **The Schedule Performance Index (SPI) is the ratio of earned value to planned value, and is used to estimate the projected time of completing the project.**
5. **Estimate at Completion (EAC) is an estimate of what it will cost to complete the project based on performance to date.**

**Question 3:** Define, the term ***Profit*** in terms of expenditures and revenues? **(1.5 points)**

**ANSWER:** **Profit = Revenues minus Expenditures (on the positive side)**

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|  |  |  |
| --- | --- | --- |
| Q1 / 6 pts | Q2 / 2.5 pts | Q3 / 1.5 pts |
| [ / 6 ] | [ / 2.5 ] | [ / 1.5 ] |

|  |  |
| --- | --- |
| Mark out of [10] | Mark out of [1.25] |
|  |  |

Extra Sheet for Calculations - if needed-

**Calculations related to problem of Question -1 :**

**EAC = BAC / CPI = 20,000 / (10/11) = 20,000 \* (11/10)= $22,000.**

**Estimated Time = 5 months / (5/6) = 5 \* (6/5) = 6 months.**