To determine whether the road construction project is expected to be completed on budget, under budget, or over budget, we can use **Cost Variance (CV)** and **Cost Performance Index (CPI)**.\[CPI = \frac{EV}{AC} \] #### Step 1: Calculate the **Cost Performance Index (CPI)** \[CPI = \frac{4,500,000}{9,000,000} = 0.5 \] A **CPI of 0.5** indicates that for every dirham spent, the project is only earning 0.5 dirhams of value.\[AC = 9,000,000 \text{ AED} \] #### Step 3: Calculate the **Cost Variance (CV)** \[CV = EV - AC = 4,500,000 - 9,000,000 = -4,500,000 \text{ AED} \] A **negative CV** means the project is over budget by AED 4,500,000.So, the Earned Value (EV) for the project after 10 weeks is: \[EV = 30\% \times 15,000,000 = 4,500,000 \text{ AED} \] #### Step 2: Calculate the **Actual Cost (AC)** The actual cost spent after 10 weeks is AED 9,000,000, as provided in the scenario.**Cost Performance Index (CPI)** CPI is a ratio that indicates the cost efficiency of the project.**Cost Variance (CV)** Cost Variance is a measure of the difference between the Earned Value (EV) and the Actual Cost (AC).### Conclusion: - The **Cost Variance (CV)** is negative (AED -4,500,000), meaning the project is over budget.### 1.### 2.