Easy | Deputy Executive Engineer (Electric | 2026 | orts Authority of Gujarat / Assistant Engineer (El

Regarding HVAC and Chiller systems, consider the following energy-saving measures: 1. Increasing the chilled water supply temperature. 2. Cleaning the condenser

A 1 only

B **1 and 2 only** Correct

C 2 and 3 only

D 1, 2 and 3

Correct Answer: B

Full Detailed Explanation

Correct Answer: B - 1 and 2 only Quick Concept Explanation A modest increase in chilled-water supply temperature can improve efficiency if comfort/process requirements permit, while clean condenser tubes preserve heat transfer. Colder cooling-tower water generally reduces compressor lift; warm condenser water increases it. Key relation: Lower condensing temperature / higher evaporating temperature lower compressor work.Exam focus: Keep heat-exchanger surfaces clean and approach temperatures small. Common trap: Warm cooling-tower water does not reduce chiller compressor load. Statement-wise Verification Statement 1 - Correct.Increasing the chilled water supply temperature.A modest increase in chilled-water supply temperature can improve efficiency if comfort/process requirements permit Statement 2 - Correct.Cleaning the condenser tubes regularly to maintain heat transfer efficiency.A modest increase in chilled-water supply temperature can improve efficiency if comfort/process requirements permit, while clean condenser tubes preserve heat transfer. Statement 3 - Incorrect.Using cooling tower water that is as warm as possible to reduce the compressor load.Lower condenser-water temperature generally lowers condensing pressure and compressor work, within chiller limits Core Concept Chiller efficiency improves when the refrigeration lift between evaporating and condensing conditions is reduced. A