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

Regarding the selection of industrial cables, consider the following: 1. XLPE insulated cables have a higher continuous operating temperature than PVC cables. 2. The

A 1 and 2 only

B 2 and 3 only

C **1 and 3 only** Correct

D 1, 2 and 3

Correct Answer: C

Full Detailed Explanation

Correct Answer: C - 1 and 3 only Quick Concept Explanation Industrial cable selection must satisfy current-carrying capacity, voltage drop, installation conditions and short-circuit withstand. XLPE insulation generally permits a higher continuous conductor temperature than PVC. Key relation: Voltage drop I(R cos +X sin)L; adiabatic short-circuit relation I t k S .Exam focus: Check ampacity, voltage drop and short-circuit withstand together. Common trap: Cable short-circuit rating is not independent of insulation temperature limits. Statement-wise Verification Statement 1 - Correct.XLPE insulated cables have a higher continuous operating temperature than PVC cables.XLPE insulation generally permits a higher continuous conductor temperature than PVC. Statement 2 - Incorrect.The short-circuit rating of a cable is independent of the insulation material.Permissible conductor temperature during a short circuit depends on insulation and cable construction, affecting short-circuit rating Statement 3 - Correct.Voltage drop calculation is mandatory for selecting long cable runs.Industrial cable selection must satisfy current-carrying capacity, voltage drop, installation conditions and short-circuit withstand. Core Concept Industrial cable selection must satisfy current-carrying capacity, voltage drop, installation conditions and short-circuit withstand. XLPE insulation