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

Regarding electrical safety and protection devices: 1. An RCCB (Residual Current Circuit Breaker) protects against earth leakage currents, which helps prevent electric

A	1 and 2 only	Correct
B	2 and 3 only	
C	1 and 3 only	
D	1, 2 and 3	

Correct Answer: A

Full Detailed Explanation

Correct Answer: A - 1 and 2 only Quick Concept Explanation An RCCB/RCD detects imbalance between live and neutral currents caused by leakage to earth and is used for shock protection. An MCB protects conductors against overload and short circuit. Key relation: Typical additional personal protection uses 30 mA RCD/RCCB.Exam focus: RCCB leakage; MCB overcurrent; SPD transient surge. Common trap: Do not expect an RCCB alone to provide overload protection. Statement-wise Verification Statement 1 - Correct.An RCCB (Residual Current Circuit Breaker) protects against earth leakage currents, which helps prevent electric shocks.An RCCB/RCD detects imbalance between live and neutral currents caused by leakage to earth and is used for shock protection. Statement 2 - Correct.An MCB (Miniature Circuit Breaker) provides protection against both overload and short-circuit faults.An MCB protects conductors against overload and short circuit. Statement 3 - Incorrect.Surge Protection Devices (SPDs) are designed to handle sustained overvoltage conditions.An SPD is designed for short-duration transient surges, not sustained overvoltage regulation Core Concept An RCCB/RCD detects imbalance between live and neutral currents caused by leakage to earth and is used for shock protection. An MCB protects conductors against overload and short circuit. Surge protective devices clamp short-duration