

Medium

Deputy Executive Engineer (Electrician) 2026

Sports Authority of Gujarat / Assistant Engineer (Electrical)

Consider the following statements regarding Corona: 1. It causes radio interference. 2. It attenuates lightning surges. 3. It causes power loss. 4. It is more

A

1, 2 and 3 only

B

1, 2 and 4 only

C

1, 2, 3 and 4

Correct

D

3 and 4 only

Correct Answer: C

Full Detailed Explanation

Correct Answer: C - 1, 2, 3 and 4 Quick Concept Explanation Corona is ionization of air around an overhead conductor when surface electric field exceeds the disruptive critical value. It causes power loss, audible noise and radio interference, but can attenuate steep lightning surges by dissipating energy. Key relation: Peek-type relation: corona loss rises strongly with $(V - V_c)$ once $V > V_c$. Exam focus: Larger conductor diameter and spacing generally raise corona inception voltage. Common trap: Do not confuse corona with skin effect inside the conductor. Statement-wise Verification Statement 1 - Correct. It causes radio interference. It causes power loss, audible noise and radio interference, but can attenuate steep lightning surges by dissipating energy. Statement 2 - Correct. It attenuates lightning surges. Can attenuate steep lightning surges by dissipating energy. Statement 3 - Correct. It causes power loss. It causes power loss, audible noise and radio interference, but can attenuate steep lightning surges by dissipating energy. Statement 4 - Correct. It is more prevalent in the middle conductor of a transmission line employing flat conductor configuration. Larger conductor diameter and spacing generally raise corona inception voltage. Core Concept Corona is ionization of air around an overhead conductor when surface electric field exceeds the disruptive critical value.