

Easy

Deputy Executive Engineer (Electrician) 2026

Ports Authority of Gujarat / Assistant Engineer (Electrical)

Consider the following regarding Diesel Generator (DG) sets:

1. An AMF (Auto Mains Failure) panel is required to automatically start the DG set when the main

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 Protective earthing provides a low-impedance path for fault current and stabilizes exposed conductive parts/neutral references.

Earth resistance should be low enough to meet protection requirements and is checked periodically because soil/moisture/corrosion can change electrode performance. Key relation: Touch voltage and disconnection time depend on earthing and protective-device coordination. Exam focus: Low earth resistance is desirable not high resistance. Common trap: Never state that high earth resistance improves safety. Statement-wise Verification Statement 1 - Correct. An AMF (Auto Mains Failure) panel is required to automatically start the DG set when the main power fails. Low earth resistance is desirable not high resistance. Statement 2 - Correct. The DG set room requires adequate ventilation to ensure combustion and to dissipate heat. Low earth resistance is desirable not high resistance. Statement 3 - Incorrect. The Neutral of the DG set should never be earthed to avoid circulating currents. Generator neutral earthing is designed to provide a reference and fault-protection path according to the earthing system; it is not categorically prohibited. Core Concept Protective earthing provides a low-impedance path for fault current and stabilizes exposed conductive parts/neutral references. Earth resistance