

Easy

Deputy Executive Engineer (Electrician) 2026

Sports Authority of Gujarat / Assistant Engineer (Electrical)

In an HVDC system,

A

Both generation and distribution are D.C.

B

Generation is A.C. and distribution is D.C.

C

Generation is D.C. and distribution is A.C.

D

Both generation and distribution are A.C.**Correct**

Correct Answer: D

Full Detailed Explanation

Correct Answer: D - Both generation and distribution are A.C. Quick Concept Explanation HVDC system in power-system exams normally refers to a high-voltage DC transmission link embedded

between AC systems. The conversion terminals are what allow two AC systems including asynchronous systems to exchange power over a DC link. Key relation: Typical chain: AC generation/grid AC/DC converter HVDC line/cable DC/AC converter AC transmission/distribution grid.Exam focus: HVDC changes the transmission medium, not the conventional AC nature of generation and distribution grids. Common trap: Reading HVDC as if the entire power system from generator to consumer were DC. Technical Verification Option A

Incorrect: conventional bulk generation is predominantly AC and end-user distribution grids are normally AC. Option B Incorrect: it makes the distribution system DC; an HVDC link normally inverts back to AC before feeding the receiving grid. Option C Incorrect: it incorrectly states DC generation and AC distribution. Option D Correct: AC generation rectifier/converter DC transmission inverter/converter AC grid/distribution. Core Concept HVDC system in power-system exams normally refers to a high-voltage DC transmission link embedded between AC systems. The conversion terminals are what allow two AC systems including asynchronous systems to exchange power over a DC link. Formula / Key Relationship Typical chain: AC generation/grid AC/DC converter HVDC line/cable DC/AC converter

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