Condition:
A particular solid is very hard and has a very high melting point. In solid state it is a non conductor & its melt is a conductor of electricity. Classify the solid
a) metallic
b) molecular
c) network
d) ionic

Solution:

a) is wrong because metallic solids are conductors.
b) is wrong because molecular solids have a low melting point.
c) is wrong because network solids are nonconductors (usually).
d) is right because ionic solids have a very high melting point, are very hard and in solid state are nonconductors, but their melts are conductors.

Type of Solid	Melting Point	Attractive Forces	Hardness	Conductivity
Molecular	Low	Van der Waals	Soft to Brittle	Nonconducting
Ionic	High to Very High	Ion-ion	Hard and Brittle	Nonconducting Solid, Conducting Liquid
Covalent Network	Very High	Covalent bonds	Very Hard	Usually Nonconducting
Metallic	Variable	Metallic bonds	Variable, Malleable	Conducting

Answer: d) ionic.