Chapter 3

Electrochemistry

(Assertion and Reason Questions)

Directions: These questions consist of two statements, each printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses.

(a) If both Assertion and Reason are correct and the Reason is a correct explanation of the Assertion.

(b) If both Assertion and Reason are correct but Reason is not a correct explanation of the Assertion.

(c) If the Assertion is correct but Reason is incorrect.

(d) If both the Assertion and Reason are incorrect.

Q.1. Assertion : The resistivity for a substance is its resistance when it is one meter long and its area of cross section is one square meter.
Reason : The SI units of resistivity is ohm metre (m).

Q.2. Assertion : On increasing dilution, the specific conductance keep on increasing.
Reason : On increasing dilution, degree of ionisation of weak electrolyte increases and molality of ions also
increases.

Q.3. Assertion : Galvanised iron does not rust.
Reason : Zinc has a more negative electrode potential than iron.

-x-x-x-

ANSWER KEY

Q.1 : (b)

Q.2 : (d) The specific conductivity decreases while equivalent and molar conductivities increase with dilution.

Q.3 : (a) Zinc metal which has a more negative electrode potential than iron will provide electrons in preference of the iron, and therefore corrodes first. Only when all the zinc has been oxidised, the iron start to rust.