Question 15:

Equivalent weight of H3PO2, when it disproportionate into PH3 and H3PO3 is

ANSWER=OPTION 3

The disproportionation reaction is:

$$3H_3PO_2 \quad \rightarrow \quad PH_3 \quad + \quad 2H_3PO_3.$$

n-factor = (No. of electrons involved / No. of molecules involved)

$$= 4/3$$

Eq. wt. = (molecular weight / n−factor) = (M×3) / 4

Answer = The equivalent weight of phosphorus is **3M/4.**