$H_3PO_4 \rightleftharpoons H^+ + H_2PO_4^- \qquad \rightleftharpoons H^+ + HPO_4^-$

$$pH = pKa + \log\frac{[A-]}{[HA]}$$

$$7 = 6.86 + \log\frac{[HPO4-]}{[H2PO4-]}$$

$$0.14 = \log\frac{[HPO4-]}{[H2PO4-]}$$

$$\frac{[HPO4-]}{[H2PO4-]} = 10^{0.14} = 1.38$$

$$[HPO4-] = 1.38\,[H2PO4-] \longrightarrow 1$$

$$[HPO4-] + [H2PO4-] = 50\ mM$$

Substitute by equation 01

$$2.38[H2PO4-] = 50\ mM$$

$$[H2PO4-] = 21\ mM$$

$$[HPO4-] = 28.99\ mM$$

Amount of $Na_2HPO^4 = \frac{28.99 \times 0.001 mol \times 50}{1000} \times 355.14g =$ 519.12 mg

Amount of $NaH^2PO_4 = \frac{21 \times 0.001 mol \times 50}{1000} \times 156.01g = 163.81$ mg

Results/Observations:

Table 01: Observation for pH of prepared buffers

Sample	Obtained pH
50mM H_3PO_3/NaOH	2.0
50mM Na_2HPO_4/ NaH_2PO_4	6.9
50mM Glycine/NaOH	10.0

Discussion