

$$8. \# \text{ of atoms} = ? n \times N_A$$

$$m = 2.38 \text{ g}$$

$$M_{\text{Cu}} = 63.55 \text{ g/mol}$$

$$n = \frac{m}{M} = \frac{2.38 \text{ g}}{63.55 \text{ g/mol}} \\ = 0.0374(5) \text{ mol}$$

$$\# \text{ of atoms} = n \times N_A$$

$$= (0.0374(5) \text{ mol}) (6.022 \times 10^{23} \text{ atoms/mol}) \\ = \boxed{2.26 \times 10^{22} \text{ atoms}}$$

$$9. \# \text{ of for. units} = ? n \times N_A$$

$$m = 15.5 \text{ g}$$

$$M_{\text{K}_3\text{PO}_4} = 3 \times \text{K} = 3 \times 39.10$$

$$1 \times \text{P} = 1 \times 30.97$$

$$4 \times \text{O} = 4 \times 16.00$$

$$\hline 212.27 \text{ g/mol}$$

$$n = \frac{m}{M} = \frac{15.5 \text{ g}}{212.27 \text{ g/mol}} = 0.0730(2) \text{ mol}$$

$$\# \text{ of for. units} = n \times N_A$$

$$= (0.0730(2) \text{ mol}) (6.022 \times 10^{23} \text{ for. units/mol})$$

$$= \boxed{4.40 \times 10^{22} \text{ for. units}}$$