

1) Draw Lewis dot structures and name the following compounds that are exceptions to the octet rule. Include ALL lone pair electrons and formal charges.

<b>ICl<sub>5</sub></b>	<b>XeF<sub>6</sub></b>	<b>BrF<sub>3</sub></b>	<b>BH<sub>3</sub></b>	<b>PCl<sub>5</sub></b>
<b>SCl<sub>6</sub></b>	<b>H<sub>3</sub>PO</b>	<b>IF<sub>3</sub></b>	<b>IF<sub>5</sub></b>	<b>SF<sub>4</sub></b>

2) Draw Lewis dot structures for the following ions, include formal charge

CH <sub>3</sub> COO <sup>-</sup>	CO <sub>3</sub> <sup>-2</sup>	CN <sup>-1</sup>	N <sub>3</sub> <sup>-1</sup>	PO <sub>4</sub> <sup>-3</sup>
CH <sub>3</sub> NH <sub>3</sub> <sup>+</sup>	<b>H<sub>3</sub>O<sup>+</sup></b>	<b>OH<sup>-1</sup></b>	BH <sub>4</sub> <sup>-1</sup>	NO <sub>2</sub> <sup>-1</sup>

3) Draw ALL the resonance structures for the following molecules and circle most likely structure. Make sure to include formal charges.

CO <sub>3</sub> <sup>2-</sup>	CN <sup>-1</sup>	N <sub>3</sub> <sup>-1</sup>	ClO <sub>3</sub> <sup>-1</sup>
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4) Name and draw the following organic molecules:

a) CH <sub>3</sub> CH <sub>2</sub> OH	b) CH <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	c) CH <sub>3</sub> CH <sub>2</sub> COOH	d) CH <sub>3</sub> CH <sub>2</sub> CHO
e) CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OH	f) CH <sub>3</sub> OCH <sub>2</sub> CH <sub>3</sub>	g) CH <sub>3</sub> CH <sub>2</sub> NH <sub>2</sub>	
h) CH <sub>3</sub> CH <sub>2</sub> CHCHCOOH	i) CH <sub>3</sub> COCH <sub>2</sub> CH <sub>3</sub>	j) N(CH <sub>3</sub> ) <sub>3</sub>	
k) CH <sub>3</sub> CH <sub>2</sub> CCCH <sub>2</sub> CHO	l) CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH(OH)CH <sub>3</sub>		
m) CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OH	n) CH <sub>3</sub> CH(OH)CH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub>		
o) CH <sub>3</sub> CH <sub>2</sub> CH(OH)CH <sub>2</sub> CH <sub>3</sub>	p) CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> COOCH <sub>2</sub> CH <sub>3</sub>		