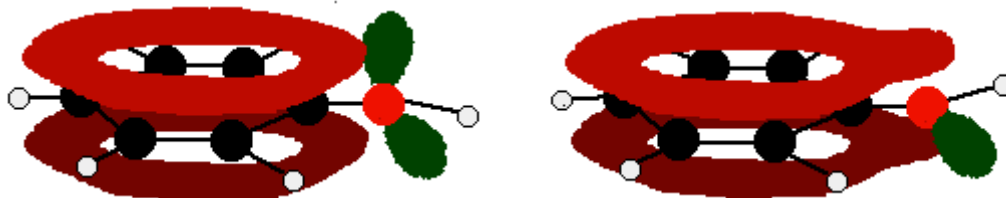


## Chemguide – questions

### PHENOL: INTRODUCTION

1. The Chemguide page has these two diagrams relating to phenol.



- a) Explain what is happening in the diagrams.
- b) Why does the bonding shown in these diagrams make the phenol ring much more reactive than a simple benzene ring?
2. a) What intermolecular forces are present in phenol crystals?
- b) Phenol is moderately soluble in water (8 g of phenol per 100 g of water). If you try to dissolve more than that, you get two liquid layers formed.
- (i) What enables phenol to be moderately soluble in water?
- (ii) What exactly is present in the two liquid layers you get if you shake a reasonable amount of solid phenol with water?