**Acids, bases and combustion**

***1. a) B***

***b) PH of potassium hydroxide is higher than that of aqueous ammonia. KOH ions are***

 ***dissociated more than that of aqueous NH3***

***2. (a) (i) X***

 ***(ii) W***

P 1

P 1

 ***(b) V***

***3. a) Methyl Orange Red/Pink p½***

 ***Phenolphthalein Colourless/Pink p½***

 ***b) The PH of 0.1M KOH is higher than of 0.1M aqueous ammonia p1***

 ***KOH is strongly dissociated in solution. p1***

***4. a) K***

 ***b)i) G***

 ***ii) I***

***5. Copper (II) oxide is insoluble in water hence there are no OH- ions in the mixture***

***6. a) S is acidic and would make the situation worse Ö ½***

 ***b) Discovery of drugs processing and testing is the work of chemists. Chemists are professionals***

 ***who have studied chemistry Ö ½***

***7. Its due to formation of insoluble Lead(II) carbonate hence preventing any further reaction.***

***8. CaO is used in correcting soil acidity. √1***

***9. (a) Pink***

P 1

P 1

 ***(b) 7.0***

P 1

***10. (a) alkali is soluble base. √1***

 ***(b) Because it is lighter than air. √1***

***11. (a)***

|  |  |  |
| --- | --- | --- |
| ***Solution***  | ***Blue litmus paper*** | ***Indicator W*** |
|  | ***BLUE*** |  |
|  |  |  |
|  | ***…RED………………………*** |  |

 ***(b) Phenolphthalein***

***12. a)-give inconsistent results√ ½***

 ***-expire shortly√ ½***

 ***b) I.***

Solvent forms

Baseline (origin)

 ***II. Maximum sports-award 1 ½ mks***

 ***Fail any one- award***

 ***III W√ ½ and Y√ ½***

***13. Sting of a bee is acidic √1 and is neutralized by sodium hydrogen carbonate√½ into a salt, carbon IV) oxide and water. This gives pain relief. √½***

***14. (a) There was production of effervescence . The lemon juice contain an acid that reacts with***

 ***the carbonate to produce carbon (IV) oxide.***

 ***(b) No production of bubbles. Copper is below hydrogen in the reactivity***

***15. (a) Yellow***

P ½

 ***Colourless***

P 1

***16. (i) K and M***

**P**

 ***(ii) K and M***