2003 Chemistry

Intermediate 1

Finalised Marking Instructions
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Marking scheme

Section A

1. D 11. A
2. D 12. A
5. B 15. D
6. A 16. B
7. B 17. C
8. C 18. C
10. B 20. A
Marking scheme

Section B

1. (a) coal/natural gas/north sea gas/peat/gas 1 mark
   (b) (i) distillation (do not need fractional) 1 mark
       (ii) Petrol is flammable/burns/catches fire easily 1 mark

2. (a) numbers should read - C_3H_8O_5NP 1 mark
     (numbers should be on or below line for mark - any higher lose ½)
   (b) use up nutrients in the soil
       or deprives plants of space/light/water/nutrients 1 mark
   (c) fungicide 1 mark

3. (a) Match/compare colour to the colour on the pH chart 1 mark
   (b) 7 1 mark
   (c) dissolve (in water)/add to water
       or wet the pH paper 1 mark

4. (a) Malachite – ½ mark if copper carbonate 1 mark
   (b) 6 1 mark

5. (a) going clockwise from top RHS, ½ mark for each label - voltmeter; tin case; paste; copper 2 marks
   (b) (i) to complete the circuit
       or to allow the paste to conduct
       or to carry the charge 1 mark
       (ii) Add iodine. (½) The iodine turns blue/black (½) 1 mark

6. (a) Polymerisation 1 mark
   (b) Put same volume (½) of hot and cold water in two beakers (½) add detergent capsules to each beaker (½) time how long to dissolve/detergent to appear in each beaker (½) 2 marks
7. (a) Prevents air/oxygen/water reacting/touching metal  
(b) galvanising  
(c) (i) rust indicator  
(ii) copper yes 
    tin yes 
    zinc no  
(7 marks)

8. (a) A drug  
(b) (i) x and y labels (½) 
    scale on y correct (½) 
    points plotted (½) 
    bars drawn (½) 2 marks

minus ½ mark if line graph

(ii) \[(2 \times 80) + 40 = 200\]  
\[80 + 40 = 120\] for ½ mark

9. (a) (i) carbon dioxide + water \[\rightarrow\] oxygen + glucose  
(ii) chlorophyll  
(b) (i) increased combustion of fuels or cutting down of forests  
(ii) 390 – 420
(8 marks)

10. (a) to place the three metals in order of reactivity  
(b) size of pieces of metal 
    or 
    mass of metal 
    or 
    temperature of acid 
    or 
    concentration of acid  
    magnesium chloride  
(12 marks)
11. (a) To improve appearance (colouring) or to preserve or to add vitamins/minerals or aid nutrition or to improve flavour 1 mark

(b) 2.5 1 mark

(c) breaks up oil and grease into droplets or helps oil and grease mix/dissolve in water 1 mark

(d) phosphorous/P 1 mark

12. (a) SO₂ 1 mark

(b) approx 20 (19 – 22) 1 mark

(c) acid rain 1 mark

[END OF MARKING INSTRUCTIONS]