



## ANSWER SHEET Sample Test v.4

Subject: Chemistry .....

Date: .....

City: .....

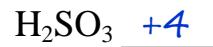
**Part A: Multiple Choice Questions**

|    |                                     |                                     |                                     |                                     |
|----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1  | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 2  | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 3  | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 4  | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 5  | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 6  | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 7  | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 8  | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 9  | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 10 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 11 | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 12 | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 13 | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 14 | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 15 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 16 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 17 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 18 | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 19 | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 20 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |

|    |                                     |                                     |                                     |                                     |
|----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 21 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 22 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 23 | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 24 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 25 | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 26 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 27 | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 28 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 29 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 30 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 31 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 32 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 33 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 34 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 35 | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |
| 36 | <input checked="" type="checkbox"/> | b                                   | c                                   | d                                   |
| 37 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 38 | a                                   | b                                   | c                                   | <input checked="" type="checkbox"/> |
| 39 | a                                   | <input checked="" type="checkbox"/> | c                                   | d                                   |
| 40 | a                                   | b                                   | <input checked="" type="checkbox"/> | d                                   |

## Part B: Short Answer Questions

1. Assign the proper oxidation state for the sulfur atom in each of the following species.



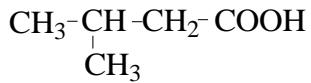
2. The concentration of  $\text{OH}^-$  ions in an aqueous solution at room temperature ( $25^\circ\text{C}$ ) is  $1 \times 10^{-6} \text{ mol.l}^{-1}$ . What is the concentration of  $\text{H}^+$  ions?

$$[\text{H}^+] \times [\text{OH}^-] = 1 \times 10^{-14} (\text{mol/l})^2$$

$$[\text{OH}^-] = 1 \times 10^{-6} \text{ mol/l}$$

$$[\text{H}^+] = \frac{1 \times 10^{-14}}{1 \times 10^{-6}} = 1 \times 10^{-8} \text{ mol/l}$$

3. Give the IUPAC name of the following compound:



3-methylbutanoic acid

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4. Show the equation and name the product formed when acetaldehyde reacts with  $\text{H}_2$ .

