**Task 5 : Part A :Chemistry Year 11: Bonding Investigation Validation Test (Total 22 marks)**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. a) Consider the following substances insolution:

**sucrose, NaCl, HCl and NaOH.**

State whichsolutions showed good conductivity (displayed a substantial current, several mA or more).

[3 marks]

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1. State the bonding type you deduced from this? (1 marks) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Explain your reasoning (2 marks)

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1. State which solutions showed low conductivity (none or very small current). ( 1 marks)

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1. State the bonding type you deduced from this? (1 marks)

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1. a) Consider the pure substance(s )(not the substances in solutions)
2. State three pure substances that showed no conductivity. ( 3 marks)

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1. State the likely bonding type and give a reason ? (2 marks)

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b) One of the substances did not conduct electricity in the solid state but did conduct electricity when it melted. State this substance.

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* ( 1 mark)

State the type of bonding? (1 mark)

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Explain why this observation occurs? ( 4 marks)

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1. State two safety precautions that you took in the experiment and fill in the table ( 3 marks)

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| **Safety**  **precaution** | **Explain why you carried out this safety precaution?** | **State the substances for which it was very important to carry out this precaution and explain why?** |
|  |  |  |
|  |  |  |