*Part (1): Multiple Choice Questions (16 Marks)*

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| The reactivity of group 1 elements increases from top to bottom because; | | | | 1 |
| It is easy to gain electrons | B) | It is easy to lose electrons | A) |  |
| Can't tell | D) | They have small sizes in each period | C) |

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| The compounds of group 1 elements are soluble in polar solvents as; | | | | 2 |
| They are ionic compounds | B) | They are covalent compounds | A) |  |
| They are nonmetals | D) | They are metalloids | C) |

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| The hybridization of Be in BeCl2 (solid) is; | | | | 3 |
| sp2 | B) | sp | A) |  |
| dsp2 | D) | sp3 | C) |

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| The missing product in the following reaction;  Sr + 2H2O ???? + H2 | | | | 4 |
| SrO | B) | Sr(OH)2 | A) |  |
| SrOH | D) | SrO2 | C) |

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| Boron can't be as B3+ and its compounds are; | | | | 5 |
| Pure covalent | B) | Pure ionic | A) |  |
| Covalent more than ionic | D) | Ionic more than covalent | C) |

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| The correct arrangements of Ga, In, and Tl as far as their oxidation state +1 as follow; | | | | 6 |
| Ga > In > Tl | B) | Tl > In > Ga | A) |  |
| Ga> Tl > In | D) | In > Ga > Tl | C) |

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| Group 16 elements are; | | | | 7 |
| All nonmetals | B) | All metals | A) |  |
| All three types | D) | All metalloids | C) |

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| Carbon has three allotropes; they are; (write their names below) | | | | 8 |
|  | 3) |  | 1) |  |
|  |  |  | 2) |

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| Phosphorus can form six covalent bonds like in PCl6- because; | | | | 9 |
| It is metal | B) | It is very large atom | A) |  |
| It has empty 3d orbitals | D) | It has empty 4d orbitals | C) |

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| The following nitrides; P3N5 and Ca3P2 respectively are; | | | | 10 |
| Covalent, ionic | B) | Ionic, covalent | A) |  |
| Both ionic | D) | Both covalent | C) |

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| One of the ways to prepare oxygen gas in lab is;  Na2O2 ??? + O2, the missing product is; | | | | 11 |
| NaO2 | B) | NaO | A) |  |
| Na | D) | Na2O | C) |

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| One of air pollutant is SO­3 it is; | | | | 12 |
| Chalking | B) | poisonous | A) |  |
| React with hydrocarbons | D) | Form acid rain | C) |

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| Hydrogen studied with halogen because they have in common; | | | | 13 |
| The same phase | B) | One electron in the valence shells | A) |  |
| The same color | D) | The same regular oxidation state | C) |

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| One of the following choices is correct for writing the formula of the halogen compounds; | | | | 14 |
| OF2 and ClBr | B) | F2O and ClBr | A) |  |
| F2O and BrCl | D) | OF and BrCl | C) |

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| Lead balloon is the balloon inflated by the following gas; | | | | 15 |
| Xe | B) | Kr | A) |  |
| Ar | D) | Rn | C) |

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| All noble gases are; | | | | 16 |
| Colored | B) | colorless | A) |  |
| Lighter than air | D) | Heavier than air | C) |

*Part 2: answer the following questions (4 Marks)*

Q1: Complete the following table:

|  |  |
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| *Name of the compounds* | *Formula* |
|  | Na2O2 |
| Potassium hydrosulfate |  |
|  | RbOCl |
| Magnesium phosphate |  |

Q2: Write the condensed electron configuration for the following elements; Sr, Tl, Ge, and Cl.

|  |  |
| --- | --- |
| Electron configuration | Element |
|  | Sr |
|  | Tl |
|  | Ge |
|  | Cl |