**Reg. NO:**

**TIME: 45 MIN**

**DATE: 24.4.20**

**REDOX REACTIONS -ANSWER KEY-HINTS AND SOLUTIONS**

**SUBJECT: CHEMISTRY**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | :CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES ANSWER KEY | | | | | | | | | 1) | **c** | **2)** | **c** | **3)** | **a** | **4)** | **d** | | 5) | **a** | **6)** | **d** | **7)** | **d** | **8)** | **b** | | 9) | **c** | **10)** | **d** | **11)** | **c** | **12)** | **d** | | 13) | **d** | **14)** | **b** | **15)** | **d** | **16)** | **b** | | 17) | **d** | **18)** | **a** | **19)** | **c** | **20)** | **a** | | 21) | **b** | **22)** | **a** | **23)** | **b** | **24)** | **c** | | 25) | **a** | **26)** | **a** | **27)** | **d** | **28)** | **a** | | 29) | **a** | **30)** | **d** |  |  |  |  | |

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| **: HINTS AND SOLUTIONS :** | |
| 1 | **(c)**  MN can exhibit + 7 oxidation no. | |
| 2 | **(c)**  Indicators are the substances which indicates the completion of a reaction. | |
| 3 | **(a)**  OR M=N/n=0.6/3=0.2  Or - | |
| 4 | **(d)**  factor = 0.6/3 = 0.2 | |
| 5 | **(a)**  is reduced. | |
| 6 | **(d)**    In this reaction Cu and Fe undergo reduction while sulphur undergoes oxidation. Hence, this is a redox reaction. | |
| 7 | **(d)**  ---do---- | |
| 8 | **(b)** | |
| 9 | **(c)**  N has +3 ox.no. which may increase (upto +5) or decrease (upto −3) | |
| 10 | **(d)**  is sodium peroxide. | |
| 11 | **(c)**  Acidified solution oxidises into  +4 +6  Hence, oxidation state of sulphur changes from +4 to +6. | |
| 12 | **(d)**  Electronation is gain of electrons i.e., | |
| 13 | **(d)**  Thus, there are lose of 8 electrons in the reaction | |
| 14 | **(b)**  It is definition of volumetric analysis. | |
| 15 | **(d)**  Oxidation takes place at anode (c) is not feasible, is not oxidised to under given conditions. Hence, option (d) is correct. | |
| 16 | **(b)**  or  Thus, | |
| 17 | **(d)**  Carbon in oxalic acid has +3 oxidation state which may be increases to +4 (in and thus, can act as reductant. Rest all have highest oxidation number. Ox.no. of N, Mn and S in | |
| 18 | **(a)** | |
| 19 | **(c)** | |
| 20 | **(a)**  is reducing and complexing agent. | |
| 21 | **(b)**  Ammonia solvated electrons are strongly reducing, impart blue colour to solution and are good conductor of current. | |
| 22 | **(a)**  is a mixture of and | |

|  |  |
| --- | --- |
| 23 | **(b)**  is isomorphous to, |
| 24 | **(c)**  Hence, changes in oxidation number are 5,1,3,4. |
| 25 | **(a)**  Alkaline earth metals have only +2 ox.no. in combined state. |
| 26 | **(a)**  Alkali metals are strongest reducing agents. |
| 27 | **(d)** |
| 28 | **(a)**  . |
| 29 | **(a)** |
| 30 | **(d)** |