## CHEMISTRY PAPER-II Practice paper Sem-IV

| Question | Option 1 | Option 2 | Option 3 | Option 4 |
| :---: | :---: | :---: | :---: | :---: |
| Law of rational-indices mainly based on the position of: | Faces. | Edges. | Solid angles | lnter-facial angle |
| The possible number of Bravais lattice is $\qquad$ . | Eleven | Twelve | Thirteen | Fourteen |
| How many elements of symmetry a cubic crystal possess? | 8 | 22 | 23 | 21 |
| A catalyst $\qquad$ the rate of chemical reaction but remains chemically unchanged at the end of reaction. | alters | only increases | only decreases | does not effect |
| The maltase enzyme catalyst converts $\qquad$ | maltose into glucose | maltose into <br> sucrose | starch into maltose | glucose into ethyl alcohol |
| The cation is strongly acidic if $\mathrm{Z}^{2} / \mathrm{r}$ is between $\qquad$ | 0.01 and 0.04 | 0.004 and 0.01 | 0.16 and 0.22 | 0.22 and 0.42 |
| pKa range for weakly acidic cation is between | 6 to 11.5 | 11.5 to 14 | 1 to 6 | 4 to 6 |
| Periodic trend in the basicity is : | $\mathrm{C}^{4-}>\mathrm{O}^{2-}<\mathrm{Te}^{2-}$ | $\mathrm{C}^{4-}>\mathrm{O}^{2-}>\mathrm{Te}^{2-}$ | $\mathrm{C}^{4-}>\mathrm{Te}^{2-}>\mathrm{O}^{2-}$ | $\mathrm{C}^{4-}<\mathrm{Te}^{2-}>\mathrm{Sn}^{2-}$ |
| The dissolution of minerals in the earths crust \& their subsequent availability to plant \& animal life is due to small amount of $\qquad$ | acidity of natural rain water | weathering of rocks | increased humidity | heat |
| The oxide which can also be used as anaesthetic is $\qquad$ | $\mathrm{SO}_{2}$ | $\mathrm{N}_{2} \mathrm{O}$ | NO | $\mathrm{NO}_{2}$ |
| The evolution of nitrogen gas upon the addition of sodium nitrite in mineral acid solution identifies the presence of $a(n)$ | Aromatic secondary amine | Aliphatic primary amine | Aromatic primary amine | Aliphatic tertiary amime |
| The most basic amine of the following is | Methylamine | Ammonia | Dimethylamine | Trimethylamin |
| The reagent that is used to prepare benzenediazonium chloride from aniline is | $\mathrm{NaNO} 2+\mathrm{HCl}$ | LiNH4 | $\begin{aligned} & \mathrm{NH}_{2} \mathrm{NH}_{2}+ \\ & \mathrm{KOH} \end{aligned}$ | NaOH |
| Action of conc. Nitric acid in presence of acetic anhydride on thiophene at low temperature gives....... | $\begin{aligned} & \hline 2- \\ & \text { nitrothiophene } \end{aligned}$ | 3nitrothiophene | 3aminothiophen e | $\begin{aligned} & \text { 2- } \\ & \text { acetylthiophen } \\ & \text { e } \end{aligned}$ |
| In pyridine all the carbon atoms as well as nitrogen atom are. $\qquad$ $\qquad$ $\qquad$ $\qquad$ .hybridized. | sp3 | sp | sp2 | sp2d |

