|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 201. | The correct order of reducing power of halide ions is : | | | | | | | | |
|  | a) |  | | | | | | | |
|  | b) |  | | | | | | | |
|  | c) |  | | | | | | | |
|  | d) |  | | | | | | | |
| 202. | <img src=”202\_Q.gif”> | | | | | | | | |
|  | a) | Oxidation reaction | | | | | | | |
|  | b) | Reduction reaction | | | | | | | |
|  | c) | Disproportionation reaction | | | | | | | |
|  | d) | Decomposition reaction | | | | | | | |
| 203. | The ox.no. of S in is : | | | | | | | | |
|  | a) | + 2.5 | | | | | | | |
|  | b) | +2 and +3 (two S have +2 and other two have +3) | | | | | | | |
|  | c) | +2 and +3 (three S have +2 and one S has +3) | | | | | | | |
|  | d) | +5 and 0 (two S have +5 and the other two S have 0) | | | | | | | |
| 204. | Oxidation is a process which involves : | | | | | | | | |
|  | a) | de-electronation | b) | Electronation | | c) | Addition of hydrogen | d) | Addition of metal |
| 205. | A student states that heating of limestone is an oxidation process, the reason he gives that an oxide of the metal is produced on heating. Which one is correct? | | | | | | | | |
|  | a) | The statement and reason are true | | | | | | | |
|  | b) | The statement and reason are wrong | | | | | | | |
|  | c) | The statement is true but the reason is false | | | | | | | |
|  | d) | None of the above | | | | | | | |
| 206. | A sulphur containing species that cannot be an oxidising agent is : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 207. | acts as ……. indicator in its redox titrations. | | | | | | | | |
|  | a) | Self | b) | External | | c) | Internal | d) | Not an |
| 208. | In a reaction between zinc and iodine in which zinc iodide is formed, which is oxidised? | | | | | | | | |
|  | a) | Zinc ions | b) | Iodide ions | | c) | Zinc atom | d) | Iodine |
| 209. | The best oxidising agent of the oxygen family is: | | | | | | | | |
|  | a) | Tellurium | b) | Selenium | | c) | Sulphur | d) | Oxygen |
| 210. | The oxidation state of iron in sodium nitroprusside is : | | | | | | | | |
|  | a) | +2 | b) | +1 | | c) | Zero | d) | +3 |
| 211. | A compound of Xe and F is found to have 53.3% Xe. Oxidation number of Xe in this compound is : | | | | | | | | |
|  | a) | −4 | b) | Zero | | c) | +4 | d) | +6 |
| 212. | Which combination is odd with respect to oxidation numbers of and respectively: | | | | | | | | |
|  | a) |  | | | | | | | |
|  | b) |  | | | | | | | |
|  | c) |  | | | | | | | |
|  | d) |  | | | | | | | |
| 213. | 0.2 g of a sample of required 10 mL of in a titration in the presence of Purity of is : | | | | | | | | |
|  | a) | 25% | b) | 85% | | c) | 65% | d) | 95% |
| 214. | When as oxidising agent and ultimately forms the number of electrons transferred per mole of each case respectively is : | | | | | | | | |
|  | a) | 4, 3, 1, 5 | b) | 1, 5, 3, 7 | | c) | 1, 3, 4, 5 | d) | 1, 3, 8, 5 |
| 215. | Titration of KI with in presence of acid is a : | | | | | | | | |
|  | a) | Clock reaction | b) | Redox reaction | | c) | Intermolecular redox | d) | All of these |
| 216. | Oxidation state of nitrogen is incorrectly given for : | | | | | | | | |
|  | a) | <img src=”216\_A1.gif”> | | | | | | | |
|  | b) |  | | | | | | | |
|  | c) |  | | | | | | | |
|  | d) |  | | | | | | | |
| 217. | Fluorine exhibits only −1 oxidation state, while iodine exhibits oxidation states of −1, +1, +3, +5 and +7. This is due to : | | | | | | | | |
|  | a) | Fluorine being a gas | | | | | | | |
|  | b) | Available *d*-orbitals in iodine | | | | | | | |
|  | c) | Non-availability of *d*-orbitals in iodine | | | | | | | |
|  | d) | None of the above | | | | | | | |
| 218. | Elements which generally exhibit multiple oxidation states and whose ions are coloured are known as : | | | | | | | | |
|  | a) | Metalloid | b) | Non-metals | | c) | Metals | d) | Transition metals |
| 219. | The oxidation state of sulphur in sodium tetrathionate () is | | | | | | | | |
|  | a) | 2 | b) | 0 | | c) | 2.5 | d) | 3.5 |
| 220. | Which is strongest oxidising agent? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 221. | Sulphur has the highest oxidation state in : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 222. | Nitrogen has fractional oxidation number in : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 223. | As the oxidation state for any metal increases, the tendency to show ionic nature: | | | | | | | | |
|  | a) | Decreases | b) | Increases | | c) | Remains same | d) | None of these |
| 224. | <img src=”224\_Q.gif”> | | | | | | | | |
|  | a) | 5 | b) | 4 | | c) | 3 | d) | 2 |
| 225. | Weight of oxidized by 200 mL of 1 solution is : | | | | | | | | |
|  | a) | 30.4 g | b) | 15.2 g | | c) | 60.8 g | d) | 158 g |
| 226. | <img src=”226\_Q.gif”> | | | | | | | | |
|  | a) | 6 | b) | 2 | | c) | 4 | d) | 3 |
| 227. | The reaction, is balanced if : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 228. | What volume of 0.40 would be required to react with the liberated by adding excess of KI to 50 mL of 0.20 solution? | | | | | | | | |
|  | a) | 12.5 mL | b) | 25 mL | | c) | 50 mL | d) | 2.5 mL |
| 229. | For the reaction, The normality of (mol.wt. = 189.7) solution prepared by dissolving 47.5 g in acid solution and diluting with to a total of 2.25 litre is : | | | | | | | | |
|  | a) | 0.222 | b) | 0.111 | | c) |  | d) |  |
| 230. | The eq.wt. of the salt to be used as an oxidant in an acidic solution is : | | | | | | | | |
|  | a) | (Mol. wt.)/1 | b) | (Mol.wt.)/2 | | c) | (Mol. wt.)/3 | d) | (Mol. wt.)/5 |
| 231. | Oxalic acid on reacting with acidified is oxidised to : | | | | | | | | |
|  | a) | and | b) | and | | c) | and | d) | and |
| 232. | The oxidation number of N and Cl in respectively are | | | | | | | | |
|  | a) | +2 and +7 | b) | +3 and +7 | | c) | and +5 | d) | +2 and |
| 233. | Sulphur in +3 oxidation state is present in | | | | | | | | |
|  | a) | Sulphurous acid | b) | Pyrosulphuric acid | | c) | Dithionous acid | d) | Thiosulphuric acid |
| 234. | Among the properties (a) reducing, (b) oxidising and (c) complexing the set of properties shown by ion towards metal species is : | | | | | | | | |
|  | a) | a,b,c | b) | b,c | | c) | c,a | d) | a,b |
| 235. | Magnesium reacts with acids producing hydrogen and corresponding magnesium salts. In such reactions magnesium undergoes : | | | | | | | | |
|  | a) | Oxidation | | | | | | | |
|  | b) | Reduction | | | | | | | |
|  | c) | Neither oxidation nor reduction | | | | | | | |
|  | d) | Simple dissolution | | | | | | | |
| 236. | What volume of 0.1 oxalic acid solution can be reduced by 250 g of an 8 per cent by weight solution? | | | | | | | | |
|  | a) | 6.3 litre | b) | 12.6 litre | | c) | 25.2 litre | d) | 0.63 litre |
| 237. | The oxidation state of +3 for phosphorus is in: | | | | | | | | |
|  | a) | Hypophosphorous acid | | | | | | | |
|  | b) | Meta-phosphoric acid | | | | | | | |
|  | c) | Ortho-phosphoric acid | | | | | | | |
|  | d) | Phosphorous acid | | | | | | | |
| 238. | When is passed through acidified solution of potassium dichromate, then chromium sulphate is formed. The change in oxidation number of chromium is : | | | | | | | | |
|  | a) | +4 to +2 | b) | +5 to +3 | | c) | +6 to +3 | d) | +7 to +2 |
| 239. | Oxidation no. of P in are respectively : | | | | | | | | |
|  | a) | +3, +5, +4 | b) | +4, +3, +5 | | c) | +3, +4, +5 | d) | +5, +3, +4 |
| 240. | Oxidation of thiosulphate (ions by iodine gives: | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 241. | 0.3 g of an oxalate salt was dissolved in 100 mL solution. The solution required 90 mL of for complete oxidation. The % of oxalate ion in salt is: | | | | | | | | |
|  | a) | 33% | b) | 66% | | c) | 70% | d) | 40% |
| 242. | How many litre of at STP will be liberated by the oxidation of with 10 g ? | | | | | | | | |
|  | a) | 3.54 litre | b) | 7.08 litre | | c) | 1.77 litre | d) | None of these |
| 243. | What is the normality of a solution to be used as an oxidant in acid medium, which contain 15.8 g of the compound in 100 mL of solution? Mol. wt. of is 158 : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 244. | in acid medium is always reduced to : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 245. | <img src=”245\_Q.gif”> | | | | | | | | |
|  | a) | 2 on the right | b) | 2 on the left | | c) | 3 on the right | d) | 4 on the left |
| 246. | What volume of 0.1 is needed to oxidise 100 mg of in acidic solution? | | | | | | | | |
|  | a) | 4.1 mL | b) | 8.2 mL | | c) | 10.2 mL | d) | 4.6 mL |
| 247. | Which one is not a redox titration? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 248. | <img src=”248\_Q.gif”> | | | | | | | | |
|  | a) | 54.0 % | b) | 27.1 % | | c) | 42% | d) | 84% |
| 249. | The missing term in following equation is : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) | None of these |
| 250. | Reaction of with in aqueous solution gives sodium bromide and sodium bromate with evolution of gas. The number of sodium bromide molecules involved in the balanced chemical equation is | | | | | | | | |
|  | a) | 1 | b) | 3 | | c) | 5 | d) | 7 |
| 251. | Oxidation number of carbon in are respectively : | | | | | | | | |
|  | a) | −4/3, + 4/3 | b) | + 4/3, −4/3 | | c) | −2/3, + 2/3 | d) | −2/3, + 4/3 |
| 252. | The reaction; shows : | | | | | | | | |
|  | a) | Oxidation | b) | Reduction | | c) | Complex formation | d) | All of these |
| 253. | The oxidation state of Cr in chromium trioxide is | | | | | | | | |
|  | a) | +3 | b) | +4 | | c) | +5 | d) | +6 |
| 254. | Oxidation number of S in is : | | | | | | | | |
|  | a) | +1 | b) | +6 | | c) | Zero | d) | −1 |
| 255. | In which of the following N has lowest oxidation number? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 256. | 2 mole of are oxidized by mole of whereas 2 mole of are oxidized by ’mole of . The ration f and is : | | | | | | | | |
|  | a) | 1 : 3 | b) | 1 : 2 | | c) | 1 : 4 | d) | 1 : 5 |
| 257. | reacts with halogens, the halogens : | | | | | | | | |
|  | a) | Are oxidised | b) | Are reduced | | c) | Form sulphur halides | d) | None of these |
| 258. | <img src=”258\_Q.gif”> | | | | | | | | |
|  | a) | Zero | b) | 1 | | c) | 2 | d) | 4 |
| 259. | The most stable oxidation state of copper is : | | | | | | | | |
|  | a) | +2 | b) | +1 | | c) | +3 | d) | +4 |
| 260. | White phosphorus reacts with caustic soda, the products are This reaction is an example of | | | | | | | | |
|  | a) | Oxidation | b) | Reduction | | c) | Disproportionation | d) | Neutralisation |
| 261. | When a sulphur atom becomes a sulphide ion : | | | | | | | | |
|  | a) | It gains two electrons | | | | | | | |
|  | b) | The mass number changes | | | | | | | |
|  | c) | There is no change in the composition of atom | | | | | | | |
|  | d) | None of the above | | | | | | | |
| 262. | Titre value is the volume of titrant used for a definite amount of unknown reagent at its : | | | | | | | | |
|  | a) | Equivalence point | b) | End point | | c) | Neutralization point | d) | All of these |
| 263. | Oxidation states of are +2, +5 and 2 respectively. Formula of the compound formed by these wii be | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 264. | In which compound, oxygen has an oxidation state of +2 ? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 265. | If equal volumes of 1 and solutions are allowed to oxidise to in acidic medium volume of oxidant required for one mole of will be : | | | | | | | | |
|  | a) |  | | | | | | | |
|  | b) |  | | | | | | | |
|  | c) |  | | | | | | | |
|  | d) | Nothing can be predicted | | | | | | | |
| 266. | How many gram of should be taken to make up 250 mL of a solution of such strength that 1 mL is equivalent to 5.0 mg of Fe in ? | | | | | | | | |
|  | a) | 1.414 g | b) | 0.70 g | | c) | 3.16 g | d) | 1.58 g |
| 267. | The oxidation number of Cr in is | | | | | | | | |
|  | a) | +3 | b) |  | | c) |  | d) |  |
| 268. | In the reaction, the oxidation state of sulphur is : | | | | | | | | |
|  | a) | Decreased | b) | Increased | | c) | Unchanged | d) | None of these |
| 269. | The equivalent weight of (acidic medium) is (at.wt. of K = 39; Mn = 55) : | | | | | | | | |
|  | a) | 158 | b) | 15.8 | | c) | 31.6 | d) | 3.16 |
| 270. | The oxidation number of chromium in potassium dichromate is | | | | | | | | |
|  | a) | +2 | b) | +4 | | c) | +6 | d) | +8 |
| 271. | The equivalent weight of is half of its molecular weight when it is converted to : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 272. | Aqueous solution of reacts with to precipitate sulphur. Here acts as : | | | | | | | | |
|  | a) | Catalyst | b) | Reducing agent | | c) | Oxidizing agent | d) | Acid |
| 273. | Saline hydrides are : | | | | | | | | |
|  | a) | Strong oxidants | | | | | | | |
|  | b) | Strong reductants | | | | | | | |
|  | c) | Strong dehydrating agents | | | | | | | |
|  | d) | Strong bleaching agents | | | | | | | |
| 274. | State the oxidation number of carbonyl carbon in methanal and methanoic acid respectively | | | | | | | | |
|  | a) | 0 and 0 | b) | 0 and +2 | | c) | +1 and +2 | d) | +1 and +3 |
| 275. | The eq.wt. of in the change is : | | | | | | | | |
|  | a) | 12.7 | b) | 63.5 | | c) | 25.4 | d) | 2.54 |
| 276. | Equivalent mass of oxidizing agent in the reaction is. <br /> | | | | | | | | |
|  | a) | 32 | b) | 64 | | c) | 16 | d) | 8 |
| 277. | In a conjugate pair of reductant and oxidant, the reductant has : | | | | | | | | |
|  | a) | Lower ox.no. | b) | Higher ox.no. | | c) | Same ox.no. | d) | Either of these |
| 278. | In which of the following reactions, hydrogen is acting as an oxidising agent? | | | | | | | | |
|  | a) | With Li to form LiH | b) | With to give HI | | c) | With S to give | d) | None of the above |
| 279. | The number of moles of Mohr’s salt required per mole of dichromate ion is : | | | | | | | | |
|  | a) | 3 | b) | 4 | | c) | 5 | d) | 6 |
| 280. | For reducing one mole of ion to Fe, the number of faraday of electricity is : | | | | | | | | |
|  | a) | 2 | b) | 1 | | c) | 1.5 | d) | 4 |
| 281. | This reaction is : | | | | | | | | |
|  | a) | Oxidation reaction | b) | Reduction reaction | | c) | Redox reaction | d) | Noneof these |
| 282. | <img src=”282\_Q.gif”> | | | | | | | | |
|  | a) | +7 | b) | −1 | | c) | +5 | d) | +1 |
| 283. | The oxidation number of N in is : | | | | | | | | |
|  | a) | −3 | b) | +3 | | c) | Zero | d) | 5 |
| 284. | by reacting with | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 285. | The oxidation number of in is : | | | | | | | | |
|  | a) | +1 | b) | +2 | | c) | −1 | d) | 0 |
| 286. | Which change occur when lead monoxide is converted into lead nitrate? | | | | | | | | |
|  | a) | Oxidation | | | | | | | |
|  | b) | Reduction | | | | | | | |
|  | c) | Neither oxidation nor reduction | | | | | | | |
|  | d) | Both oxidation and reduction | | | | | | | |
| 287. | How many mole of electron are involved in the reduction of one mole of ion in alkaline medium to ? | | | | | | | | |
|  | a) | 2 | b) | 1 | | c) | 3 | d) | 4 |
| 288. | The oxidation number of Fe in is : | | | | | | | | |
|  | a) | +2 | b) | +3 | | c) | +4 | d) | +6 |
| 289. | For the reaction,  occurring in basic medium, the coefficient of in the balanced equation will be | | | | | | | | |
|  | a) | 1 | b) | 2 | | c) | 3 | d) | 4 |
| 290. | In the reaction | | | | | | | | |
|  | a) | is an acid and is a base | | | | | | | |
|  | b) | is a base and is an acid | | | | | | | |
|  | c) | is an oxidising agent and is a reducing agent | | | | | | | |
|  | d) | is a reducing agent and is an oxidising agent | | | | | | | |
| 291. | When is converted into the change in the oxidation state of sulphur is from: | | | | | | | | |
|  | a) | 0 to +2 | b) | +2 to +4 | | c) | +4 to +2 | d) | +4 to +6 |
| 292. | The oxidation number of nitrogen in is : | | | | | | | | |
|  | a) | +1 | b) | −1 | | c) | −3 | d) | −2 |
| 293. | In the reaction, The ratio of equivalent weight of to its molecular weight is : | | | | | | | | |
|  | a) | 1/8 | b) | 1/4 | | c) | 1/2 | d) | 1 |
| 294. | <img src=”294\_Q.gif”> | | | | | | | | |
|  | a) | The colour of the solution changes from green to blue | | | | | | | |
|  | b) | The iron (II) ions are reduced | | | | | | | |
|  | c) | The dichromate ions are reduced | | | | | | | |
|  | d) | Hydrogen ions are reduced | | | | | | | |
| 295. | <img src=”295\_Q.gif”> | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 296. | Which is a redox reaction? | | | | | | | | |
|  | a) |  | | | | | | | |
|  | b) |  | | | | | | | |
|  | c) |  | | | | | | | |
|  | d) |  | | | | | | | |
| 297. | Which one of the following reactions involves disproportionation? | | | | | | | | |
|  | a) |  | | | | b) |  | | |
|  | c) |  | | | | d) |  | | |
| 298. | The oxidation state of chromium in the final product formed by the reaction between KI and acidified potassium dichromate solution is | | | | | | | | |
|  | a) | +3 | b) | +2 | | c) | +6 | d) | +4 |
| 299. | Which of the following acts as an oxidising as well as reducing agent? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 300. | Oxidation state of carbon in graphite is: | | | | | | | | |
|  | a) | Zero | b) | +1 | | c) | +4 | d) | +2 |
| 301. | Which compound has oxidation number of carbon equal to zero? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 302. | In the reaction, the reduction product is : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 303. | The oxidation number of phosphorus in is : | | | | | | | | |
|  | a) | + 5 | b) |  | | c) | +6 | d) |  |
| 304. | 1 mole of chlorine combines with a certain weight of a metal giving 111 g of its chloride. The atomic weight of the metal (assuming its valency to be 2) is : | | | | | | | | |
|  | a) | 40 | b) | 20 | | c) | 80 | d) | None of these |
| 305. | <img src=”305\_Q.gif”> | | | | | | | | |
|  | a) | +10 | b) | +6 | | c) | +3 | d) | +2 |
| 306. | Oxidation states of the metal in the minerals haematite and magnetite, respectively, are | | | | | | | | |
|  | a) | II, III in haematite and III in magnetite | | | | b) | II, III in haematite and II in magnetite | | |
|  | c) | II in haematite and II, III in magnetite | | | | d) | III in haematite and II, III in magnetite | | |
| 307. | The colour of changes from red-orange to lemon-yellow on treatment with because of : | | | | | | | | |
|  | a) | Reduction of (VI) to (III) | | | | | | | |
|  | b) | Formation of chromium hydroxide | | | | | | | |
|  | c) | Conversion of dichromate into chromate ion | | | | | | | |
|  | d) | Oxidation of potassium hydroxide to potassium peroxide | | | | | | | |
| 308. | How many electrons are involved in oxidation of in basic medium? | | | | | | | | |
|  | a) | 1 | b) | 2 | | c) | 5 | d) | 3 |
| 309. | The oxidation state of nitrogen in is : | | | | | | | | |
|  | a) | −3 and +5 | b) | +3 and +5 | | c) | +5 | d) | +3 |
| 310. | When chloride is treated with excess is formed. The oxidation state of in this complex is: | | | | | | | | |
|  | a) | +6 | b) | −2 | | c) | +4 | d) | −5 |
| 311. | Oxidation number of chlorine in is : | | | | | | | | |
|  | a) | Zero | b) | −1 | | c) | +1 | d) | +2 |
| 312. | In the reaction, acts as : | | | | | | | | |
|  | a) | An oxidising agent | | | | | | | |
|  | b) | An acid | | | | | | | |
|  | c) | An acid as well as oxidising agent | | | | | | | |
|  | d) | A reducing agent | | | | | | | |
| 313. | Change of hydrogen into proton is : | | | | | | | | |
|  | a) | Oxidation of hydrogen | | | | | | | |
|  | b) | Acid-base reaction | | | | | | | |
|  | c) | Reduction of hydrogen | | | | | | | |
|  | d) | Displacement reaction | | | | | | | |
| 314. | 8 g of sulphur are burnt to form which is oxidised by water. The solution is treated with solution. The amount of precipitated is : | | | | | | | | |
|  | a) | 1.0 mole | b) | 0.5 mole | | c) | 0.24 mole | d) | 0.25 mole |
| 315. | The number of mole of ferrous oxalate oxidised by one mole of is: | | | | | | | | |
|  | a) | 1/5 | b) | 3/5 | | c) | 2/3 | d) | 5/3 |
| 316. | Reactants react in the equal number of …….. to give products. | | | | | | | | |
|  | a) | Mole | b) | Weights | | c) | Equivalent | d) | All of these |
| 317. | Mole and millimole of reactants react in the ……….as represented by balanced stoichiometric equation. | | | | | | | | |
|  | a) | Molar ratio | b) | Equal amount | | c) | Both (a) and (b) | d) | None of these |
| 318. | The reaction of white phosphorus with aqueous gives phosphine along with another phosphorus containing compound. The reaction type the oxidation states of phosphorus in phosphine and the other product are respectively : | | | | | | | | |
|  | a) | Redox reaction; −3 and −5 | | | | | | | |
|  | b) | Redox reaction; +3 and +5 | | | | | | | |
|  | c) | Disproportionation reaction; −3 and +1 | | | | | | | |
|  | d) | Disproportionation reaction; −3 and +3 | | | | | | | |
| 319. | Which can act only as oxidising agent? | | | | | | | | |
|  | a) | Oxygen | b) | Fluorine | | c) | Iodine | d) |  |
| 320. | For the reaction : ; if and are equivalent masses of and respectively, then is : | | | | | | | | |
|  | a) | 1 | b) | 2 | | c) | 3 | d) | 4 |
| 321. | Bleaching action of is due to : | | | | | | | | |
|  | a) | Reduction | b) | Oxidation | | c) | Hydrolysis | d) | Acidic nature |
| 322. | In is : | | | | | | | | |
|  | a) | Oxidised | b) | Reduced | | c) | Both (a) and (b) | d) | None of these |
| 323. | If three electrons are lost by a metal ion its final oxidation number will be : | | | | | | | | |
|  | a) | Zero | b) | +6 | | c) | +2 | d) | +4 |
| 324. | In the reaction, : | | | | | | | | |
|  | a) | is oxidised | | | | | | | |
|  | b) | is reduced | | | | | | | |
|  | c) | Both and are reduced | | | | | | | |
|  | d) | None of the above | | | | | | | |
| 325. | Which of the following acts as an oxidizing agent? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) | All of these |
| 326. | <img src=”326\_Q.gif”> | | | | | | | | |
|  | a) | 12.7 g | b) | 0.558 g | | c) | 25.4 g | d) | 11.4 g |
| 327. | The number of mole of that will be needed to react with one mole of sulphite ion in acidic solution is : | | | | | | | | |
|  | a) | 2/5 | b) | 3/5 | | c) | 4/5 | d) | 1 |
| 328. | What weight of is required to make 1 litre of 2 solution to be used as an oxidising agent in the reaction? | | | | | | | | |
|  | a) | 63 g | b) | 21 g | | c) | 42 g | d) | 84 g |
| 329. | The oxidation state of two sulphur atoms in | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 330. | In a conjugate pair of reductant and oxidant, the oxidant has : | | | | | | | | |
|  | a) | Higher ox.no. | b) | Lower ox.no. | | c) | Same ox.no. | d) | Either of these |
| 331. | In the equation, . The equivalent weight of hydrogen sulphide is : | | | | | | | | |
|  | a) | 17 | b) | 34 | | c) | 68 | d) | 18 |
| 332. | In which transfer of five electrons takes place? | | | | | | | | |
|  | a) | <img src=”332\_A1.gif”> | b) | <img src=”332\_A2.gif”> | | c) | <img src=”332\_A3.gif”> | d) | <img src=”332\_A4.gif”> |
| 333. | Oxidation number of nitrogen is highest in | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 334. | Starch gives blue colour with : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) | None of these |
| 335. | The number of mole of potassium salt, oxidised by one mole of permanganate ion is : | | | | | | | | |
|  | a) | 2/5 | b) | 4/5 | | c) | 1 | d) | 5/4 |
| 336. | When an acidified solution of ferrous ammonium sulphate is treated with solution, the ion which is oxidised is : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 337. | Oxidation number of N in is : | | | | | | | | |
|  | a) | −3 | b) | +3 | | c) | Zero | d) | −1/3 |
| 338. | Hydrogen peroxide in aqueous solution decomposes on warming to give oxygen according to the equation, under conditions where one mole of gas occupies 24 of solution of produces 3 of . Thus, is : | | | | | | | | |
|  | a) | 2.5 | b) | 1 | | c) | 0.5 | d) | 0.25 |
| 339. | and KI on mixing gives : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 340. | Which metal exhibits more than one oxidation states? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 341. | Which of the following oxidation state is the most common among the lanthanoides : | | | | | | | | |
|  | a) | 4 | b) | 2 | | c) | 5 | d) | 3 |
| 342. | 13.5 g aluminium changes to in solution by losing : | | | | | | | | |
|  | a) | electrons | | | | | | | |
|  | b) | electrons | | | | | | | |
|  | c) | electrons | | | | | | | |
|  | d) | electrons | | | | | | | |
| 343. | In the oxidation number of is : | | | | | | | | |
|  | a) |  | b) | +2 | | c) | Zero | d) | +4 |
| 344. | In the compounds the highest oxidation state is of the element | | | | | | | | |
|  | a) | Mn | b) | K | | c) | O | d) | Cr |
| 345. | The oxidation state of nitrogen varies from : | | | | | | | | |
|  | a) | −3 to +5 | b) | 0 to +5 | | c) | −3 to 1 | d) | +3 to +5 |
| 346. | The oxidation state of hydrogen in is : | | | | | | | | |
|  | a) | +1 | b) |  | | c) | Zero | d) | +2 |
| 347. | The most common oxidation state of an element is —2. The number of electrons present in its outermost shell is : | | | | | | | | |
|  | a) | 2 | b) | 4 | | c) | 6 | d) | 8 |
| 348. | A good indicator must possess the following characteristics : | | | | | | | | |
|  | a) | The colour change should be sharp | | | | | | | |
|  | b) | The colour change should be clear | | | | | | | |
|  | c) | It must be sensitive to the equivalent point | | | | | | | |
|  | d) | All of the above | | | | | | | |
| 349. | The oxidation number of Xe in and is | | | | | | | | |
|  | a) | +6 | b) | +4 | | c) | +1 | d) | +3 |
| 350. | The oxidation number of arsenic in arsenate is : | | | | | | | | |
|  | a) | +5 | b) | +4 | | c) | +6 | d) | +2 |
| 351. | The reaction, <br />S  is an example of | | | | | | | | |
|  | a) | Reduction | b) | Oxidation | | c) | Disproportionation | d) | None of these |
| 352. | During the presence of and in a mixture, on addition of dil. one notice that: | | | | | | | | |
|  | a) | and are not formed | | | | | | | |
|  | b) | and formed during change undergoes a redox change forming colloidal sulphur and thus, no smell | | | | | | | |
|  | c) | A smell of burning sulphur | | | | | | | |
|  | d) | A smell of rotten egg | | | | | | | |
| 353. | Which is not an oxidising agent? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 354. | The charge on cobalt in is : | | | | | | | | |
|  | a) | −6 | b) | +3 | | c) | −3 | d) | +6 |
| 355. | The most stable oxidation state of chromium is : | | | | | | | | |
|  | a) | + 5 | b) | + 3 | | c) | + 2 | d) | + 4 |
| 356. | Arrange the following as increase in oxidation number <br /> (i) (ii)(iii) (iv) | | | | | | | | |
|  | a) | (i)>(ii)>(iii)>(iv) | b) | (i)<(ii)<(iv)<(iii) | | c) | (ii)<(iii)<(i)<(iv) | d) | (iii)>(i)>(iv)>(ii) |
| 357. | What mass of is reduced by 35 mL of 0.16 oxalic acid in acidic solution? The skeleton equation is, | | | | | | | | |
|  | a) | 8.7 g | b) | 0.24 g | | c) | 0.84 g | d) | 43.5 g |
| 358. | Stronger is oxidising agent, more is; | | | | | | | | |
|  | a) | Standard reduction potential of that species | | | | | | | |
|  | b) | The tendency to get itself oxidised | | | | | | | |
|  | c) | The tendency to lose electrons by that species | | | | | | | |
|  | d) | Standard oxidation potential of that species | | | | | | | |
| 359. | <img src=”359\_Q.gif”> | | | | | | | | |
|  | a) | 101 g | b) | 202 g | | c) | 50.5 g | d) | 303.0 g |
| 360. | When is reduced with oxalic acid in acid medium, the oxidation number of changes from: | | | | | | | | |
|  | a) | +7 to +4 | b) | +6 to +4 | | c) | +7 to +2 | d) | +4 to +2 |
| 361. | Addition of zinc powder to solution precipitates copper due to : | | | | | | | | |
|  | a) | Reduction of | b) | | <img src=”361\_A2.gif”> | c) | Reduction of | d) | Hydrolysis of |
| 362. | Titrations in which liberated is estimated to carry out the volumetric estimations are known as ….titrations. | | | | | | | | |
|  | a) | Iodometric | b) | Iodimetric | | c) | Acidimetric | d) | Alkalimetric |
| 363. | In the course of chemical reaction, an oxidant : | | | | | | | | |
|  | a) | Loses electron | b) | Gains electron | | c) | Either of these | d) | None of these |
| 364. | In alkaline condition reacts as follows :<br /> The eq. wt. of is : | | | | | | | | |
|  | a) | 52.7 | b) | 158 | | c) | 31.6 | d) | 79 |
| 365. | Oxidation number of nitrogen in is: | | | | | | | | |
|  | a) | +5 | b) |  | | c) | +3 | d) |  |
| 366. | Total number of molecules in a sample of containing ions of is : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 367. | Oxidation number of N in is : | | | | | | | | |
|  | a) | +3 | b) | +2 | | c) | +1 | d) | +4 |
| 368. | The oxidation state of chlorine is highest in the compound : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 369. | How many gram of are contained in 4 litre of 0.05 solution? The is to be used as an oxidant in acidic medium : | | | | | | | | |
|  | a) | 1.58 g | b) | 15.8 g | | c) | 6.32 g | d) | 31.6 g |
| 370. | The reaction; shows : | | | | | | | | |
|  | a) | Acidic nature of | | | | | | | |
|  | b) | Alkaline nature of | | | | | | | |
|  | c) | Oxidising action of | | | | | | | |
|  | d) | Reducing action of | | | | | | | |
| 371. | <img src=”371\_Q.gif”> | | | | | | | | |
|  | a) | 2&nbsp&nbsp&nbsp5&nbsp&nbsp&nbsp16 | | | | b) | 16&nbsp&nbsp&nbsp 5&nbsp&nbsp&nbsp 2 | | |
|  | c) | 5&nbsp&nbsp&nbsp 16&nbsp&nbsp&nbsp2 | | | | d) | 2&nbsp&nbsp&nbsp 16&nbsp&nbsp&nbsp 5 | | |
| 372. | Chlorine has +1 oxidation state in : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 373. | Which statement is incorrect? | | | | | | | | |
|  | a) | Oxidation of a substance is followed by reduction of another | | | | | | | |
|  | b) | Reduction of a substance is followed by oxidation of another | | | | | | | |
|  | c) | Oxidation and reduction are complementary reactions | | | | | | | |
|  | d) | It is not necessary that both oxidation and reduction should take place in the same reaction | | | | | | | |
| 374. | In the standardization of using by iodometry, the equivalent weight of is : | | | | | | | | |
|  | a) | (molecular weight)/2 | | | | | | | |
|  | b) | (molecular weight)/6 | | | | | | | |
|  | c) | (molecular weight)/3 | | | | | | | |
|  | d) | Same as molecular weight | | | | | | | |
| 375. | When is passed in a solution of potassium iodate, the oxidation state of iodine changes from : | | | | | | | | |
|  | a) | +5 to 0 | b) | +5 to −1 | | c) | −5 to 0 | d) | −7 to −1 |
| 376. | The halogen that shows same oxidation state in all its compounds with other elements is: | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 377. | The reaction,<br />is an example of | | | | | | | | |
|  | a) | Disproportionation reaction | | | | b) | Neutralisation reaction | | |
|  | c) | Double-decomposition reaction | | | | d) | Pyrolytic reaction | | |
| 378. | Titrations in which solution is used as intermediate are known as ….titrations. | | | | | | | | |
|  | a) | Iodometric | b) | Iodimetric | | c) | Acidimetric | d) | alkalimetric |
| 379. | <img src=”371\_Q.gif”> | | | | | | | | |
|  | a) | I | b) | O | | c) | H | d) | Cr |
| 380. | Carbon reacts with oxygen to form two oxides, and . This is because : | | | | | | | | |
|  | a) | Carbon has two crystalline forms | | | | | | | |
|  | b) | Carbon has two oxidation states | | | | | | | |
|  | c) | Oxygen donates as well as accept electrons | | | | | | | |
|  | d) | Oxygen has a strong affinity for carbon | | | | | | | |
| 381. | How many milliliter of 0.5 solution will reduce 600 mL of 0.1 to ? | | | | | | | | |
|  | a) | 120 mL | b) | 60 mL | | c) | 30 mL | d) | 240 mL |
| 382. | What weight of (mol. wt. =152) will be oxidised by 200 mL of normal solution in acidic solution? | | | | | | | | |
|  | a) | 30.4 g | b) | 60.8 g | | c) | 121.6 g | d) | 15.8 g |
| 383. | How many milligram of iron ( are equal to 1 mL of 0.1055 equivalent? | | | | | | | | |
|  | a) | 5.9 mg | b) | 0.59 mg | | c) | 59 mg | d) | mg |
| 384. | Number of moles of required to oxidise one mole of ferrous oxalate completely in acidic medium will be : | | | | | | | | |
|  | a) | 0.4 mole | b) | 7.5 mole | | c) | 0.2 mole | d) | 0.6 mole |
| 385. | and are three elements forming a part of compound in oxidation states of +2, +5 and −2 respectively. What could be the compound? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 386. | <img src=”386\_Q.gif”> | | | | | | | | |
|  | a) |  | b) | 1 | | c) |  | d) | 2 |
| 387. | In which of the following reactions, chlorine acts as an oxidising agent?  <br /> <br />The correct answer is | | | | | | | | |
|  | a) | (i) only | | | | | | | |
|  | b) | (ii) only | | | | | | | |
|  | c) | (i) and (iii) | | | | | | | |
|  | d) | (i),(ii) and (iii) | | | | | | | |
| 388. | During a redox change, the oxidant is always reduced to : | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 389. | When potassium permanganate is titrated against ferrous ammonium sulphate, the equivalent weight of potassium permanganate is : | | | | | | | | |
|  | a) | Molecular weight/10 | b) | Molecular weight/5 | | c) | Molecular weight/2 | d) | Molecular weight |
| 390. | Which conversion is an oxidation? | | | | | | | | |
|  | a) | <img src=”390\_A1.gif”> | b) | <img src=”390\_A2.gif”> | | c) |  | d) |  |
| 391. | In which case +1 oxidation state is stable than +3? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 392. | In the reduction of dichromate by Fe(II), the number of electrons involved per chromium atom is : | | | | | | | | |
|  | a) | 3 | b) | 1 | | c) | 2 | d) | 4 |
| 393. | When is converted into the change in oxidation number of chromium is | | | | | | | | |
|  | a) | 0 | b) | 5 | | c) | 7 | d) | 9 |
| 394. | Which of the following acts as both an oxidizing as well as reducing agent? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 395. | In which of the following compounds, nitrogen exhibits highest oxidation state? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 396. | <img src=”396\_Q.gif”> | | | | | | | | |
|  | a) | <img src=”396\_A1.gif”> | | | | | | | |
|  | b) | <img src=”396\_A2.gif”> | | | | | | | |
|  | c) | <img src=”396\_A3.gif”> | | | | | | | |
|  | d) | <img src=”396\_A4.gif”> | | | | | | | |
| 397. | Which one of the compound does not decolourised an acidified solution of ? | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 398. | When one mole of reacts with HCl, the volume of chlorine liberated at NTP will be: | | | | | | | | |
|  | a) | 11.2 litre | b) | 22.4 litre | | c) | 44.8 litre | d) | 56.0 litre |
| 399. | What would happen when a small quantity of is added to a solution of ? | | | | | | | | |
|  | a) | Colour disappears | | | | | | | |
|  | b) | is evolved | | | | | | | |
|  | c) | An electron is added to | | | | | | | |
|  | d) | An electron is lost by | | | | | | | |
| 400. | The oxidation state of I in is | | | | | | | | |
|  | a) | +1 | b) | +3 | | c) | +5 | d) | +7 |
| 401. | The number of moles of reduced by one mole of in alkaline medium is | | | | | | | | |
|  | a) | 1 | b) | 5 | | c) | ½ | d) | 1/5 |
| 402. | <img src=”402\_Q.gif”> | | | | | | | | |
|  | a) | 200 mL of the KI solution reacts with 0.10 mole . | | | | | | | |
|  | b) | 100 mL of the KI solution reacts with 0.060 of . | | | | | | | |
|  | c) | 0.5 litre of the KI solution produces 0.15 mole of | | | | | | | |
|  | d) | None of the above | | | | | | | |
| 403. | Oxidation number of chromium in is : | | | | | | | | |
|  | a) | +2 | b) | +3 | | c) | +6 | d) | —4 |
| 404. | A standard solution is one whose : | | | | | | | | |
|  | a) | Concentration is 1 *M* | | | | | | | |
|  | b) | Concentration is unknown | | | | | | | |
|  | c) | Concentration is known | | | | | | | |
|  | d) | None of the above | | | | | | | |
| 405. | In the reaction, the substance oxidised is | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 406. | <img src=”406\_Q.gif”> | | | | | | | | |
|  | a) |  | b) |  | | c) |  | d) |  |
| 407. | The oxidation number that iron does not exhibit in its common compounds or in its elemental state is : | | | | | | | | |
|  | a) | Zero | b) | +1 | | c) | +2 | d) | +3 |
| 408. | Oxidation number of Cl in is : | | | | | | | | |
|  | a) | +7 | b) | −7 | | c) | +5 | d) | −5 |
| 409. | In which reaction is hydrogen acting as an oxidising agent? | | | | | | | | |
|  | a) | With iodine to give hydrogen iodide | | | | | | | |
|  | b) | With lithium to give lithium hydride | | | | | | | |
|  | c) | With nitrogen to give ammonia | | | | | | | |
|  | d) | With sulphur to give hydrogen sulphide | | | | | | | |
| 410. | In presence of moisture can : | | | | | | | | |
|  | a) | Gain electrons | | | | | | | |
|  | b) | Lose electrons | | | | | | | |
|  | c) | Act as oxidising agent | | | | | | | |
|  | d) | Does not act as reducing agent | | | | | | | |
| 411. | The oxidation number of Mn in is : | | | | | | | | |
|  | a) | +4 | b) | +6 | | c) | +2 | d) | −4 |
| 412. | Which is not correct in case of Mohr’s salt? | | | | | | | | |
|  | a) | It decolourises | | | | | | | |
|  | b) | It is primary standard | | | | | | | |
|  | c) | It is a double salt | | | | | | | |
|  | d) | Oxidation state of is +3 in the salt | | | | | | | |
| 413. | In the reduction of dichromate by Fe (II), the number of electrons involved per chromium atom is : | | | | | | | | |
|  | a) | 3 | b) | 1 | | c) | 2 | d) | 4 |
| 414. | Which of the following is a redox reaction? | | | | | | | | |
|  | a) |  | | | | b) |  | | |
|  | c) |  | | | | d) |  | | |
| 415. | What volume of 2 solution is required to oxidise 0.81 g of in acidic medium? | | | | | | | | |
|  | a) | 47.8 mL | b) | 23.8 mL | | c) | 40 mL | d) | 72 mL |
| 416. | Oxidation number of As atom in is : | | | | | | | | |
|  | a) | +5 | b) | +6 | | c) | +4 | d) | −3 |
| 417. | In the following change, . If the atomic weight of iron is 56, then its equivalent weight will be : | | | | | | | | |
|  | a) | 42 | b) | 21 | | c) | 63 | d) | 84 |
| 418. | In permonosulphuric acid ( the oxidation number of sulphur is | | | | | | | | |
|  | a) | +8 | b) | +4 | | c) | +5 | d) | +6 |
| 419. | The reaction, <br />  is an example of | | | | | | | | |
|  | a) | Reduction | b) | Oxidation | | c) | Comproportionation | d) | Disproportionation |
| 420. | Amount of oxalic acid present in a solution can be determined by its titration with solution in the presence of . The titration gives unsatisfactory result when carried out in the presence of HCl, because HCl : | | | | | | | | |
|  | a) | Oxidises oxalic acid to carbon dioxide and water | | | | | | | |
|  | b) | Gets oxidized by oxalic acid to chlorine | | | | | | | |
|  | c) | Furnishes ions in addition to those from oxalic acid | | | | | | | |
|  | d) | Reduces permanganate to | | | | | | | |
| 421. | Which is not a redox change? | | | | | | | | |
|  | a) |  | | | | | | | |
|  | b) |  | | | | | | | |
|  | c) | <img src=”421\_A3.gif”> | | | | | | | |
|  | d) | <img src=”421\_A4.gif”> | | | | | | | |
| 422. | Sulphurous acid can be used as : | | | | | | | | |
|  | a) | Oxidising agent | b) | Reducing agent | | c) | Bleaching agent | d) | All of these |