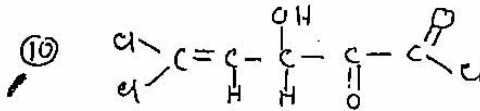
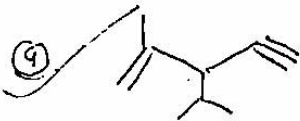
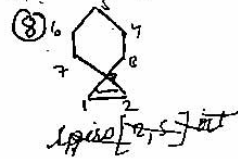
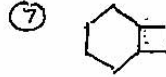
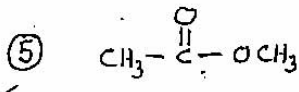
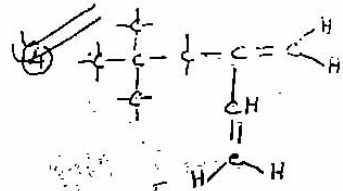
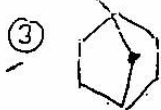
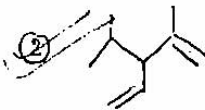
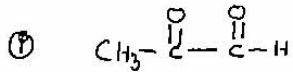


CLASS - XI  
CHEMISTRY  
Section A

(A) Give the I.U.P.A.C name for the following compounds



(11) Lactic acid

(12) Glycerol

(13) Glycol

(14) Tertiary butyl alcohol

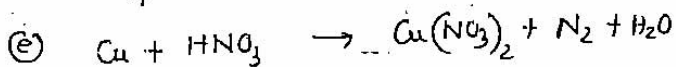
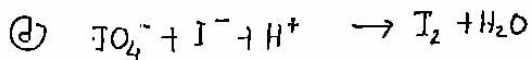
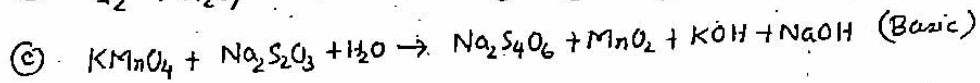
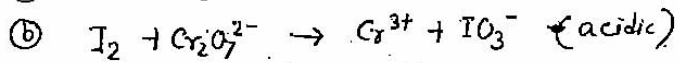
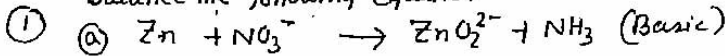
(15) Formaldehyde

(B) (1) Write short notes on Wurtz reaction, Corey house synthesis. (5)

(2) Straight chain or branched chain isomers which has more boiling point and why

Section B

Balance the following equation



(2) (a) state and explain Bohr's theory (5)

(b) Find out the energy of an electron moving around the nucleus

(c) How many spectral lines are emitted by atomic hydrogen excited to the  $n$ th energy level

③ (a) 20 ml of 2.2 (19)  $MnSO_4$  completely oxidises 10 ml of  $KMnO_4$  of unknown normality each forming  $Mn^{2+}$  and  $MnO_2$  respectively. Find out the normality and molarity of  $KMnO_4$  solution.

(b)  $KMnO_4$  oxidised  $X^{n+}$  ion to  $XO_3^-$  itself changes to  $Mn^{2+}$  in acid solution.  $2.68 \times 10^{-3}$  moles of  $X^{n+}$  requires  $1.61 \times 10^{-3}$  moles of  $MnO_4^-$ . What is the value of  $n$ ? Also calculate the atomic mass of  $X$ . If the weight of 1 gram equivalent of  $XCl_n$  is 56.

④ (a) Define molality and mole fraction.

(b) 10 ml of a gaseous organic compound containing C, H and O only was mixed with 100 ml of oxygen and exploded under condition which allowed the water formed to ~~evaporate~~ condense. The volume of the gas after explosion was 90 ml, on treatment with potash solution, a further contraction of 20 ml in volume was observed. Given that the vapour density of the compound is 23 deduce the molecular formula.

⑤ (a) A solid mixture (5g) consisting of lead nitrate and sodium nitrate was heated below  $600^\circ C$  until the weight of the residue is constant. If the loss in weight is 28%. Find the amount of lead nitrate and sodium nitrate in the mixture.  $[M.Pb(NO_3)_2 = 331, P.O. = 223]$

(b) A 2 gram sample containing  $Na_2CO_3$  and  $NaHCO_3$  loses 0.248 gram when heated to  $300^\circ C$ . What is the percentage of  $Na_2CO_3$  in the mixture.  $[Na_2 = 23]$