

CLASS XI  
2nd weekly

{ FM = 50  
TIME - 1½ hrs

### Section A

Q1. Write down the hybridized structure of the following compound

- (a)  $C_2H_2$  (b)  $XeF_4$  (c)  $SF_6$  (d)  $H_2O$  (e)  $NH_3$  (10)

Q2. (a) State and explain M.O.T (3)

(b) prove that  $O_2$  is a paramagnetic substance (2)

Q3. (a) State and explain metallic bonding (2)

(b) Why  $H_2O$  is a liquid but  $H_2S$  is a gas (2)

(c) Alkali metals when dissolved in liquid  $NH_3$  becomes blue in color and also become good conductor. (2)

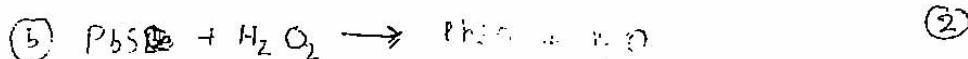
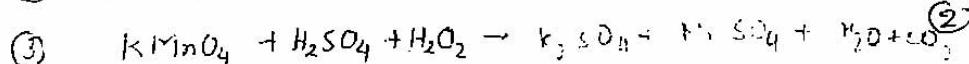
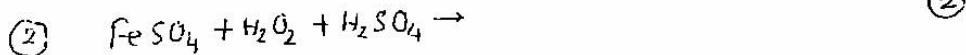
(d)  $Li^+$  is the largest cation in the periodic table in aqueous medium (2)

(e) Work out the Lewis dot structure of  $H_2SO_4$  and  $HNO_3$ . (2)

### Section B

Q1. (a) Express 20 V of  $H_2O_2$  in terms of Normality and grams/litre (2)

(b) Give the chemical reactions of  $H_2O_2$  with the following (2)



(c) Give reasons for the following

(i) Anhydrous  $BaO_2$  is not used for the preparation of  $H_2O_2$  (2)

(ii)  $H_2O_2$  solution cannot be concentrated by heating (2)

- (c) Water is considered as a universal solvent ②
- (d) Explain what is temporary and permanent hardness of water  
Give the cause and also give one method each to remove  
the above types of hardness [only reactions needed] ②

(e) Give the following conversion

- (a) Ethane to glyoxal ①
- (b) Acetylene to isopropyl alcohol ④
- (c) Ethene to propene ①
- (d) Ethane to Benzene ①
- (e) Ethane to methane ①