

DATE :8/11/24	M T 2	TIME:50 MINS
GRADE:11	CHEMISTRY(043)	MARK:20

All questions are compulsory.

Q NO	SECTION A	MARK
1.	The hybridization in ethyne is : a. sp b. sp2 c.sp3 d.sp3	1
2.	Which statement is coreect? a.bond order is directly proportional to bond length b.bond order is inversely proportional to bond length c. bonding MO is less stable than antibonding MO. d.bond order is inversely proportional to bond strength	1
3.	Find the conjugate acid and conjugate base of H2PO4- a.HPO4-H3PO4 b.HPO4, H3PO4 d. H3PO4, HPO4-2c. HPO4-2, H3PO4d. H3PO4, HPO4-2	1
4.	Which is a Lewis acid?a.Cl-b.NH3c.BF3d.H2O	1
5.	For which of the following reaction is Kp less than Kc? a.2HI $\leftarrow = \rightarrow$ H2 +I2. b.N2 +O2 $\leftarrow \rightarrow$ 2NO. c.N2O4 $\leftarrow = \rightarrow$ 2NO2 d.2SO2+O2 $\leftarrow = \rightarrow$ 2SO3	1
	SECTION B	
6.	Which has more dipole moment and why? NH3 and NF3.	2
7.	Why NH4Cl is added alongwith NH4OH in group 3 analysis?	2

8.	Find Kp of the reaction PCI5 $<==\Rightarrow$ PCI3 +CI2 at 25°C Kc= 2.2x10 -4 mol/l . R=0.0821	2
	SECTION C	
9.	Using a neat diagram explain the hybridization in ethene.CH2=CH2	3
10.	Using MO configuration compare the stabilities of 02, 02+,02- Also explain their magnetic nature.	3
11.	<ul> <li>Applying Le Chatliers principle ,explain how concentration, pressure and temperature affects the maximum yield of SO3 in the equillibrium reaction.</li> <li>2 SO2 + O2 ←=&gt; 2SO3 ΔH= -223.5 KJ/mol</li> </ul>	3

\*\*\*\*\*