Sri Chaitanya IIT Academy, India

A.P, TELANGANA, KARNATAKA, TAMILNADU, MAHARASHTRA, DELHI, RANCHI

A right Choice for the Real Aspirant

ICON CENTRAL OFFICE, MADHAPUR-HYD

Sec: Sr. IPLCO **Date: 26-09-15**

Time: 9:00 AM to 12:00 Noon **RPTM-8** **Max.Marks: 360**

KEY SHEET

CHEMISTRY		PHYSICS		MATHS	
Q.NO	ANSWER	Q.NO	ANSWER	Q.NO	ANSWER
1	4	31	3	61	1
2	3	32	2	62	1
3	4	33	2	63	1
4	2	34	3	64	3
5	2	35	3	65	2
6	1	36	2	66	3
7	4	37	2	67	1
8	3	38	4	68	4
9	1	39	3	69	1
10	4	40	4	70	1
11	3	41	3	71	4
12	4	42	2	72	3
13	2	43	3	73	4
14	3	44	4	74	3
15	4	45	3	75	3
16	4	46	3	76	4
17	3	47	1	77	3
18	4	48	1	78	1
19	3	49	2	79	4
20	4	50	1	80	2
21	2	51	3	81	2
22	2	52	4	82	3
23	3	53	2	83	2
24	1	54	2	84	4
25	4	55	3	85	4
26	4	56	3	86	3
27	2	57	1	87	3
28	1	58	3	88	1
29	2	59	4	89	3
30	3	60	2	90	1

CHEMISTRY

1. Ionic bicarbonates are stable

2. Li_3N and Mg_3N_2

3. A: $NH_4HCO_3, NH_4HCO_3 + NaCl \rightarrow NaHCO_3(B) + NH_4Cl(C)$

   $2NaHCO_3 \xrightarrow{\Delta} Na_2CO_3(D) + H_2O + CO_2$

4. $2KO_2 + 2H_2O \rightarrow 2KOH + H_2O_2 + O_2$

5. $x = 4, y = 6, z = 6$

6. $4LiNO_3 \xrightarrow{\Delta} 2Li_2O + 4NO_2(B) + O_2(C)$

   $2NaNO_3 \xrightarrow{\Delta} 2NaNO_2(D) + O_2$

7. More covalent

8. $r_+ << r_-, r_+ >> r_-$, Lattice energy is lesser. Soluble in water.

9. Due to higher hydration energy Li is a better reducing agent. Due to lower ΔH_{sub} *and IE* , Mg is a better reducing agent.

10. Note that it is liquor ammonia (aqueous) and not liquid NH_3.

11. Anomolous behavior of Li.

12. $KNO_2 + O_2, Cs\ NO_2 + O_2$

13. *Fr*,*Ra*

14. $CaC_2 \xrightarrow{H_2O} C_2H_2$ (oxyacetylene)

15. BeO, Al_2O_3 film is formed.

16. Perchlorates are soluble in water.

17. Gas is $CH_3 - C \equiv CH$, *Carbide is* Mg_2C_3

$$^{2-}:\ddot{C} = C = \ddot{C}:^{2-}$$

18. They can adsorb dyes.

19. It gives $Mg(NH_4)(PO_4)$, the insoluble phosphate.

20. $BaCO_3$ and $BaCrO_4$ are insoluble in water.

21. $A \rightarrow B_2H_6 + CH_3 - CH = CH_2 \rightarrow B(CH_2\ CH_2CH_3)_3 \xrightarrow{NaOH\ /\ H_2O_2} CH_3CH_2CH_2OH$

22. $BCl_3 -$ due to back bonding

23. Can react both with acid and base.

24. Intermolecular hydrogen bonding and not intra molecular.

25. Due to restricted rotation along B – B axis, B_2H_6 has higher specific heat.

26. $B_3N_3H_6$: Bonds are polar.

27. More EN, acidic oxide.

28. Salt of $NaOH$ (Strong base) and weak acid boric acid.

29. Mohrs salt. $FeSO_4.(NH_4)_2\ SO_4.6H_2O$

30. Cr^{3+} in Al_2O_3 gives red color Ruby, used in Lasers.