16-08-15\_Sr. IPLCO\_JEE-ADV\_(2012\_P2)\_RPTA-3\_Key &Sol's



# Sri Chaitanya IIT Academy, India

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A right Choice for the Real Aspirant ICON CENTRAL OFFICE, MADHAPUR-HYD

 Sec: Sr.IPLCO
 JEE-ADVANCE
 Date: 16-08-15

 Time: 3 Hours
 2012-P2-Model
 Max Marks: 198

### **KEY & SOLUTIONS**

#### **PHYSICS**

1	A	2	D	3	D	4	С	5	A	6	D
7	D	8	С	9	A	10	С	11	A	12	A
13	В	14	С	15	AC	16	ACD	17	ВС	18	AB
19	CD	20	CD								

#### **CHEMISTRY**

	<del></del>										
21	В	22	A	23	С	24	A	25	A	26	В
27	D	28	В	29	В	30	С	31	A	32	С
33	В	34	С	35	CD	36	ACD	37	ABCD	38	ABC
39	ВС	40	AC	6 9					W	$D_{ij}$	

#### **MATHS**

41	D	42	D	43	C	44	В	45	A	46	A
47	C	48	D	49	D	50	C	51	A	52	D
53	A	54	C	55	BCD	56	AC	57	ABC	58	BD
59	ВС	60	ABD								

## **CHEMISTRY**

21.

- 22. Electron with drawing groups increases reactivity towards Nucleophile
- 23.

$$\frac{C_6H_5COCl}{AlCl_3} \longleftrightarrow C \longleftrightarrow Br_2 \longleftrightarrow C \longleftrightarrow Br_2$$

$$E \to C \to Br_2$$

$$E \to C$$

- 24. Intermolecular nucleophilic substitution
- 25.

$$Cl \longrightarrow Cl \longrightarrow Cl \longrightarrow Cl \longrightarrow Cl$$

- 26.  $S_N 2$ : Inverted product
- 27.  $S_N 2$ : reactivity is more with good leaving group
- 28.

29, 30

Orientation effects

31, 32.

$$OC_{2}H_{5}$$

$$Cl$$

$$CH_{2}-CH_{2}-CH_{3}$$

$$CH = CH-CH_{3}$$

$$OC_{2}H_{5}$$

$$CH_{3}KMNO_{4}/OH$$

$$COOH$$

$$NaOH+CaO$$

$$OC_{2}H_{5}$$

$$CH_{3}KMNO_{4}/OH$$

$$OC_{2}H_{5}$$

$$OC_{2}H_{5}$$

$$OC_{2}H_{5}$$

$$OC_{2}H_{5}$$

$$OC_{2}H_{5}$$

$$OC_{2}H_{5}$$

33.

$$CH_3$$
 $Br$ 

*CH*<sub>3</sub> No hydrogens on adjacent carbons to one which is bonded to halogen. So elimination –addition mechanism is not possible.

34.

$$\begin{array}{c}
CH_3 & \ominus & CH_3 \\
NH_2 & & O \\
NH_2 & & NH_2
\end{array}$$

$$\begin{array}{c}
CH_3 & CH_3 \\
NH_2 & & NH_3
\end{array}$$

$$\begin{array}{c}
NH_3 & CH_3 \\
NH_2 & & NH_2
\end{array}$$

35.  $-N = 0 \rightarrow \text{Deactivating}, \text{O/P-directing}.$ 

36.

$$\bigcirc \Theta$$
  $\bigcirc \Theta$ 

Aromatic

Non-Aromatic

37.

$$CH_3 \xrightarrow{Br_2} Br \xrightarrow{COOH} CH_3 \xrightarrow{KMnO_4} Br \xrightarrow{KOO_2} COOH$$

38. *–OH* is converted into good leaving group by converting into phosphate, esrers.

39.

40.