ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

WORKSHEET-09(SOLUTION)CLASS-12

TOPIC- ALKYL AND ARYL HALIDE

SUBTOPIC- CHEMICAL REACTIONS OF GRIGNARD REAGENT

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -12.05.20**

1.1 Which of the following compound gives response to Haloform reaction?

a) HCHO b) $CH_3CH_2CH_2OH$ c) CH_3COCH_3 d) $CH_3CH_2COCH_2CH_3$

Ans. c) CH_3COCH_3

1.2 Carbyl amine reaction is given by-

a) Ammonia b) Aliphatic primary amine c) Aliphatic alcohol d) Alkane

Ans. b) Aliphatic primary amine

1.3 Reimer-Tiemann reaction results in the formation of-

a) HCHO b) Benzoic acid c) Salicylic acid d) Salicyldehyde

Ans. d) Salicyldehyde

1.4 Which of the following compounds is most rapidly hydrolyzed by S_N1 mechanism?

a) C_6H_5Cl b) CH_2=CH-CH_2Cl c) $(C_6H_5)_3CCl$ d) $C_6H_5CH_2Cl$

Ans. c) $(C_6H_5)_3CCl$

1.5 Which one of the following species is not an electrophile?

a) ROH b) I^+ c) H^+ d) $AlCl_3$

Ans. a) ROH

1.6 Which one among the following is not a good leaving group?

a) HSO_4^- b) Cl^- c) Br^- d) F^-

Ans. d) F^-

1.7 Chloro benzene undergoes which of the following reaction?

a) Dow's process b) Reimer-Tiemann reaction c) Cannizaro reaction d) Clemenson reduction

Ans. a) Dow's process

1.8 Benzyl chloride on treatment with aq. NH_3 produces-

a) Benzyl amine b) Benzaldehyde c) Both a and b d) Benzyl cyanide

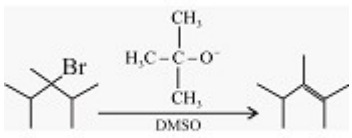
Ans. a) Benzyl amine

1.9 Chloral forms a stable germinal diol due to-

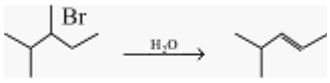
a) Formation of inter molecular H-bonding b) Resonance c) Inductive effect d) Formation of intra molecular H-bonding

Ans. d) Formation of intra molecular H-bonding

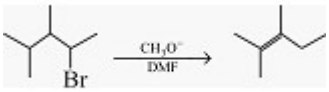
1.10 Which of the following reactions does not represent the major product given?



(a)



(b)

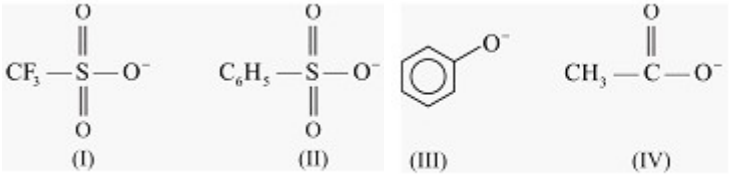


(c)

(d)

Ans. d)

1.11 Consider the following anions:



When attached to sp^3-hybridized carbon, their leaving group ability in nucleophilic substitution reaction decreases in the order-

(a) I > II > III > IV (b) I > II > IV > III (c) IV > I > II > III (d) IV > III > II > I

Ans. (a) I > II > III > IV

1.12 $CH_3CH_2CH_2Br + NaCN \rightarrow CH_3CH_2CH_2CN + NaBr$, will be fastest in

(a) ethanol (b) methanol (c) N, N dimethyl formamide (d) Water

Ans. (c) N, N dimethyl formamide

1.13 A dihalogen derivative 'X' of a hydrocarbon with three carbon atoms react with ale. KOH and produces hydrocarbon which forms red ppt. with ammonical Cu_2Cl_2. 'X' gives an aldehyde on reaction with aq. KOH. The compound 'X' is-

(a) 1, 3-Dichloropropane (b) 1, 2-Dichloropropane (c) 2, 2-Dichloropropane

(d) 1, 1-Dichloropropane

Ans. (d) 1, 1-Dichloropropane

1.14 How many chiral compounds are possible on monochlorination of 2-methyl butane?

(a) 2 (b) 4 (c) 6 (d) 8

Ans. (a) 2

1.15 S_N2 reaction of alkyl halides lead to-

(a) Retention of configuration (b) Racemisation (c) Inversion of configuration

(d) None of these

Ans. (c) Inversion of configuration

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