

Student's Quiz Time  
Departmental Quiz for 3rd Semester (Major)

Questions for quiz

1. Which catalyst is used in the Rosenmund reduction of Acid chlorides?

Ans: Palladium supported over barium sulphate.

2. Which product is formed in the hydration of acetylene in the presence of a solution of mercuric sulphate and sulphuric acid?

Ans: Acetaldehyde (ethanal).

3. When vapours of Ethanol is passed over a catalyst such as reduced copper or silver at  $300^{\circ}$ , which product is formed?

Ans: Acetaldehyde (ethanal).

4. When 2-Propanol or Propane-2-ol reacts with potassium dichromate in sulphuric acid, which product is formed?

Ans: Acetone or Propanone.

5. Give the name of the reaction: "In the presence of a strong base non-aldolizable aldehydes undergo self oxidation-reduction i.e. disproportionation reaction"

Ans: Cannizzaro reaction.

6. Give the name of the reaction: "treatment of an aromatic aldehyde with aqueous alcoholic KCN or NaCN for the formation of  $\alpha$ -hydroxy ketones."

Ans: Benzoin condensation.

7. Give the name of the reaction: "Synthesis of alkene by the treatment of aldehydes or ketones with alkylidene triphenylphosphine".

Ans: Wittig reaction.

8. Give the name of the reaction: "Condensation of aldehydes and ketones with active methylene compounds in presence of a base".

Ans: Knoevenagel condensation.

9. Give the name of the reaction: "The acid catalyzed conversion of ketoximes to N-substituted amides".

Ans: Beckmann reaction/rearrangement.

10. Give the name of the reaction: "Reduction of carbonyl groups of aldehydes and ketones to methylene groups with Zn-Hg amalgam and conc. HCl."

Ans: Clemmensen reduction.

11. Give the name of the reaction: "Crossed aldol condensation between aromatic aldehydes and aliphatic aldehydes with subsequent dehydration results  $\alpha,\beta$ -unsaturated aldehydes".

Ans: Claisen-schmidt reaction.

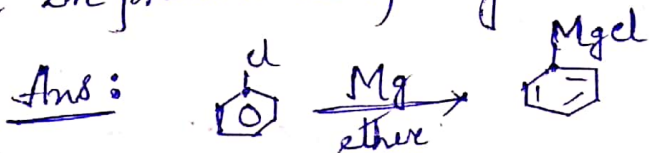
Organic

Quiz  
3rd Sem (Major)

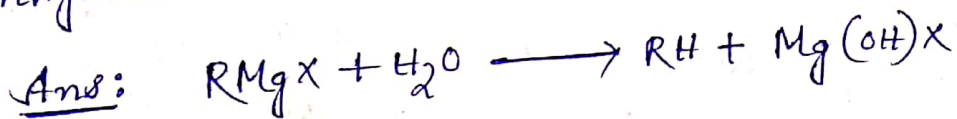
① What is the chemical formula of iodoform?

Ans:  $\text{CHI}_3$

② What happens when chlorobenzene react with Mg in presence of dry ether.



③ Why Grignard reagent should be prepared in anhydrous condition?



④ Out of  $\text{CH}_3\text{Cl}$  and  $\text{CH}_3\text{I}$ , which will undergo faster  $\text{S}_\text{N}2$  reaction?

Ans:  $\text{CH}_3\text{I}$

⑤ Why vinyl chloride does not undergo nucleophilic substitution?

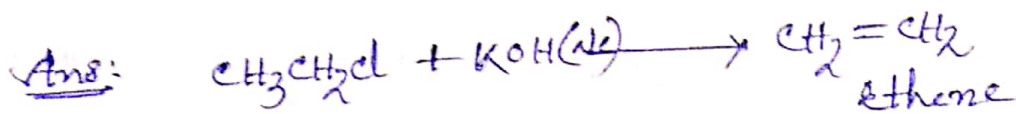
⑥ What is the full meaning of DDT?

Ans: Dichloro diphenyl trichloro ethane.

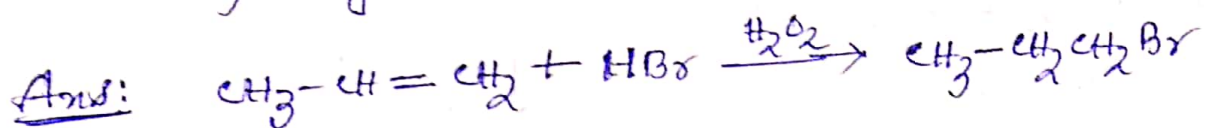
⑦ In which mechanism of nucleophilic substitution reaction the retention of configuration is maintained?

Ans:  $\text{S}_\text{N}1$

⑦ What happens when ethyl chloride is treated with alcoholic KOH



⑧ What happens when propene is treated with HBr in presence of organic peroxide.



⑨ What is the chemical formula of benzyne?



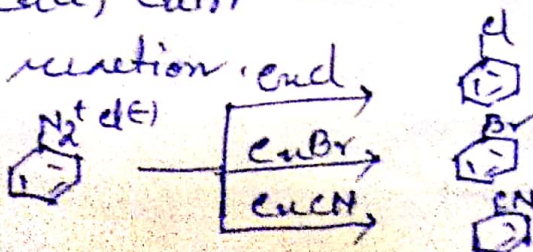
⑩ Out of chlorobenzene and benzyl chloride, which one will undergo faster  $\text{S}_{\text{N}}1$  mechanism.

Ans: Benzyl chloride.

⑪ What is Sandmeyer reaction?

Ans: ~~Arene diazonium salts react with  $\text{CuCl}$ ,  $\text{CuBr}$  and  $\text{CuCN}$~~

Chlorobenzene, bromobenzene and cyanobenzene can be prepared by using arene diazonium salt and  $\text{CuCl}$ ,  $\text{CuBr}$  and  $\text{CuCN}$  is known as Sandmeyer reaction.



### Quiz for SEM III (MAJOR)

1. Which borane has butterfly-like structure? Ans. Arachno borane
2. What is the styx number of diborane? Ans. 2002
3. What is called as Inorganic benzene? Ans. Borazine
4. At high temperature, what is the product formed by diborane in presence of excess ammonia? Ans. Boron nitride
5. What is pyroboric acid? Ans.  $H_6B_4O_9$
6. Which allotrope of carbon forms intercalation compounds readily? Ans. Graphite
7.  $Si_3H_8$  is which type of hydride? Ans. Covalent hydride
8. Why  $IF_5$  is a good conductor of electricity? Ans. Due to autoionization
9. Which hybridization occurs in  $IF_7$ ? Ans.  $sp^3d^3$
10. What is the oxidation state of chlorine in perchloric acid? Ans. +7
11. Which oxide of nitrogen is used as an anaesthetic? Ans.  $N_2O$

QUIZ QUESTIONS(3<sup>rd</sup>sem)

1. Name one ore of Aluminium. (Bauxite)
2. What is Froth Floatation? (a method used for concentrating metal ore.)
3. What is  $H^+$ ? a Lewis acid or a Lewis base? (Lewis acid)
4. What is the strongest Bronstead acid? (Perchloric acid,  $HClO_4$ )
5. What is the conjugate base of water? (Hydronium ion,  $H_3O^+$ )
6. According to HSAB principle, a hard acid always combines with a -----base. (hard)
7. In case of  $\alpha$ -halo acetic acids , the acid strength increases or decreases with the increase in magnitude of electron withdrawing power of the attached halogen group? (increases)
8. What do you mean by Gold Parting? (Separation of Gold from Silver)
9. Which technique is used for both extraction of nickel from ore and purification of nickel from crude? (Mond's Process)
10. What is Gangue or Matrix? ( Impurities associated with ores are called gangue or matrix.)
11. What is hydrometallurgy? (Hydrometallurgy is the extraction of metals by dissolving the ore in a suitable reagent followed by the displacement of the metal by a more reactive one.)

Question 1: A phase is ----- in nature throughout the system

- (i) Homogeneous
- (ii) Heterogeneous
- (iii) Both
- (iv) None of the above

Question 2: What is the number phases in a mixture of three immiscible liquids

- (i) 1
- (ii) 2
- (iii) 3
- (iv) 0

Question 3: What is the number of phases in

$\text{CaCO}_3(\text{s}) \rightleftharpoons \text{CaO}(\text{s}) + \text{CO}_2(\text{g})$

- (i) 1
- (ii) 2
- (iii) 3
- (iv) 0

Question 4: What is degree of freedom for a system where liq water is in equilibrium with its vapor?

- (i) 1
- (ii) 2
- (iii) 3
- (iv) 0

Question 5: At triple point ----- phases coexist in equilibrium

- (i) 1
- (ii) 2
- (iii) 3
- (iv) 0

Question 6: Stiffness of slope is maximum for

- (i)  $\text{sol} \rightleftharpoons \text{liq}$
- (ii)  $\text{sol} \rightleftharpoons \text{vap}$
- (iii)  $\text{vap} \rightleftharpoons \text{liq}$
- (iv) Same for all

Question 7: A solid that gives a melt with same composition is said to have ----- mp

- (i) congruent
- (ii) incongruent
- (iii) normal
- (iv) standard

Question 8: Degree of freedom at triple point of a system is

- (i) 1
- (ii) 2
- (iii) 3
- (iv) 0

Question 9: Solid solutions are ----- in composition throughout

- (i) homogeneous
- (ii) heterogeneous
- (iii) both
- (iv) none of the above

Question 10: How many phases coexist in equilibrium in a lead-silver system

- (i) 1
- (ii) 2
- (iii) 3
- (iv) 0

Question 11: Surface between the two phases disappear at

- (i) normal bp
- (ii) standard bp
- (iii) critical temperature
- (iv) normal mp

question 1

In chemisorption, monolayer or multilayer formation occurs.....

ans. monolayer

question 2

On decreasing temperature adsorption increases or decreases

ans. increases

question 3

Freundlich adsorption isotherm can be used to model.....

multilayer or monolayer formation

ans. multilayer

question 4

what is promoter

ans. it catalyzes the catalyst

question 5

adsorption is surface or bulk phenomenon

ans. surface

q.6

one use of adsorption

q.7

what is negative catalyst ?

q.8

a plot of  $x/m$  vs  $p$  gives a straight line with slope equal to.....

ans.  $1/n$

q.9

**Homogeneous catalysis does mean**

ans. Catalyst and reactants must be in the same phase

q.10 Shape selective catalysis is a reaction catalysed by

ans zeolite

q.11 Which of types of metals make the most efficient catalyst?

ans transition metal