BUDDHA SERIES

(Unit Wise Solved Question & Answers)

Course–B.Sc. 3rd Year (5th Sem)

College–Buddha Degree College

(DDU Code-859)

Department: Science

Subject: Rearrengement Of Chemistry

Faculty Name: Mr.Pinku Kumar

Unit-1

1. Which of the following is a rearrangement reaction?

A) Friedel-Crafts acylation

B) Beckmann rearrangement

C) Grignard reaction

D) Cannizzaro reaction

Answer: B) Beckmann rearrangement

2. Beckmann rearrangement involves conversion of oximes into:

A) Esters

B) Alcohols

C) Amides

D) Ketones

Answer: C) Amides

3. The migrating group in Beckmann rearrangement is:

A) The OH group

B) The hydrogen atom

C) The group anti to OH

D) The group syn to OH

Answer: D) The group syn to OH

4. Which of the following rearrangement involves the conversion of ketones to esters?

A) Claisen rearrangement

B) Baeyer-Villiger oxidation

C) Pinacol rearrangement

D) Wolff rearrangement

Answer: B) Baeyer-Villiger oxidation

5. The Curtius rearrangement gives:

A) Amide

B) Carboxylic acid

C) Amine

D) Alcohol

Answer: C) Amine

6. Which compound undergoes Hofmann rearrangement?

A) Amide

B) Alcohol

C) Ketone

D) Carboxylic acid

Answer: A) Amide

7. Hofmann rearrangement produces:

A) Aldehyde

B) Alkene

C) Primary amine

D) Secondary amine

Answer: C) Primary amine

8. Which rearrangement involves nitrenes as intermediates?

A) Curtius

B) Pinacol

C) Claisen

D) Fries

Answer: A) Curtius

9. In the Pinacol rearrangement, the major product is:

A) Alcohol

B) Ether

C) Ketone

D) Ester

Answer: C) Ketone

10. The rearrangement of allyl vinyl ethers to γ,δ-unsaturated carbonyl compounds is known as:

A) Claisen rearrangement

B) Cope rearrangement

C) Pinacol rearrangement

D) Curtius rearrangement

Answer: A) Claisen rearrangement

11. Wolff rearrangement involves:

A) Diazo ketones

B) Oximes

C) Alcohols

D) Amines

Answer: A) Diazo ketones

12. Which is a [3,3] sigmatropic rearrangement?

A) Claisen

B) Beckmann

C) Curtius

D) Hofmann

Answer: A) Claisen

13. The migrating group in Hofmann rearrangement is:

A) OH

B) NH_2

C) Alkyl

D) R group from the amide

Answer: D) R group from the amide

14. In the Baeyer-Villiger oxidation, the order of migration tendency is:

A) H > phenyl > 3° > 2° > 1°

B) 1° > 2° > 3°

C) 3° > 2° > 1°

D) 1° > H > 3°

Answer: A) H > phenyl > 3° > 2° > 1°

15. Which rearrangement involves heating of acyloxy ketones to give phenols?

A) Fries

B) Beckmann

C) Curtius

D) Claisen

Answer: A) Fries

16. The intermediate in Pinacol rearrangement is:

A) Carbocation

B) Carbanion

C) Nitrene

D) Carbene

Answer: A) Carbocation

17. Schmidt rearrangement involves:

A) Carboxylic acid + hydrazoic acid

B) Amide + Br_2

C) Oxime + acid

D) Ketone + hydrogen peroxide

Answer: A) Carboxylic acid + hydrazoic acid

18. The Lossen rearrangement converts:

A) Acid to alcohol

B) Urea to amine

C) Hydroxamic acid to isocyanate

D) Ester to ether

Answer: C) Hydroxamic acid to isocyanate

19. The key feature of Claisen rearrangement is:

A) Radical mechanism

B) Nitrene intermediate

C) [3,3]-sigmatropic shift

D) Electrophilic substitution

Answer: C) [3,3]-sigmatropic shift

20. In which rearrangement is an isocyanate formed as an intermediate?

A) Curtius

B) Pinacol

C) Cope

D) Fries

Answer: A) Curtius

21. Which rearrangement requires a strong acid catalyst like $H_2\ SO_4$?

A) Pinacol

B) Curtius

C) Hofmann

D) Cope

Answer: A) Pinacol

22. Rearrangement reaction used in the synthesis of lactams is:

A) Beckmann

B) Pinacol

C) Claisen

D) Curtius

Answer: A) Beckmann

23. In Cope rearrangement, the reaction proceeds via:

A) Carbocation

B) Free radical

C) Six-membered cyclic transition state

D) Carbanion

Answer: C) Six-membered cyclic transition state

24. What is the major product of the Schmidt rearrangement?

A) Amine

B) Ketone

C) Amide

D) Ester

Answer: A) Amine

25. Tiffeneau-Demjanov rearrangement is associated with:

A) Ring contraction

B) Ring expansion

C) Double bond shift

D) Aromatization

Answer: B) Ring expansion

26. What is the product of the Hofmann rearrangement of benzamide?

A) Benzylamine

B) Aniline

C) Phenol

D) Benzaldehyde

Answer: B) Aniline

27. Arndt-Eistert reaction involves:

A) Rearrangement of acid chlorides

B) Isomerization of alkenes

C) Reduction of aldehydes

D) Oxidation of amines

Answer: A) Rearrangement of acid chlorides

28. Which rearrangement is photochemically induced?

A) Fries

B) Wolff

C) Pinacol

D) Claisen

Answer: B) Wolff

29. Which is a rearrangement reaction of alcohols to aldehydes or ketones?

A) Pinacol

B) Wolff

C) Cope

D) Claisen

Answer: A) Pinacol

30. Claisen rearrangement proceeds through:

A) Carbocation intermediate

B) Carbene intermediate

C) Concerted mechanism

D) Free radical intermediate

Answer: C) Concerted mechanism