

JVM's Mehta College
Mission Exam-2020
Mock Test MSc-1 Sem-I Organic Chemistry

1). (-)Lactic acid and (+)lactic acid is a pair of

- A).Diastereomers
- B).Anomers
- C).Epimers
- D).Enantiomers

2). Why o- hydroxyl benzoic acid is more acidic as compared to p- hydroxyl benzoic acid?

- A).Due to electron withdrawing effect of –COOH group
- B).Due to electron donating effect of –OH group
- C).Due to intermolecular hydrogen bonding
- D).Due to intramolecular hydrogen bonding

3). Corey's reagent is

- A).pyridinium chlorochromate (PCC)
- B).CrO₃-Pyridine
- C).Pyridinium Dichromate (PDC)
- D).2-Iodoxy benzoic acid

4). (R)-Carvone and (S)-Carvone can be distinguished from each other by this method

- A).Physical constant
- B).Optical rotation
- C).UV spectroscopy
- D).Infra spectroscopy

5). Which statement is incorrect for meso compounds

- A).It contains a chiral center
- B).It is optically active
- C).It has at least one element of symmetry
- D).It contains a plane of symmetry

6). Why piperidine is more basic than pyridine?

- A).Due to unavailability of electrons for protonation
- B).Due to readily availability of electrons for protonation
- C).Due to presence of secondary amine
- D).Due to absence of double bonds in the ring

7). Atropisomerism is due to

- A).restricted rotation about the C-C bond
- B).restricted rotation about the C=C bond
- C).restricted rotation about the carbon-carbon triple bond
- D).restricted rotation in the cyclic compound

8). Choose the statement which is not applicable to Jones reagent.

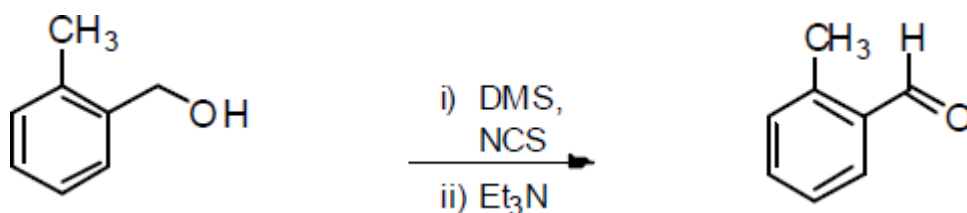
- A).It is an oxidizing agent for primary and secondary alcohol
- B).CrO₃/H₂SO₄ in the presence of acetone is Jones reagent
- C).It can be used to oxidize allylic and benzylic alcohols
- D).It oxidizes ketones to carboxylic acid

9). Arrange the following in decreasing order of acidity:

(i) Phenol (ii) o-nitro phenol (iii) m-nitro phenol (iv) p- nitro phenol

- A).(i) > (ii) > (iii) > (iv)
- B).(i) > (ii) > (iv) > (iii)
- C).(ii) > (iv) > (iii) > (i)
- D).(ii) > (iii) > (iv) > (i)

10). Identify the following name oxidation



- A).Cornforth's oxidation
- B).Swern Oxidation
- C).Jones oxidation
- D).Corey Kim Oxidation

11). The reagent DDQ is used for

- A).Oxidation of alcohol
- B).Dehydrogenation
- C).Reduction of the double bond
- D).chlorination

12). Stereoisomers that are non-superimposable mirror images are known as

- A).Enantiomers
- B).Diastereomers
- C).Epimers

D).

13). Which of the following mechanism occurs when there are electron withdrawing groups on the aromatic ring during nucleophilic substitution?

A).Addition - Substitution

B).Substitution – Addition

C).Elimination – Addition

D).Addition – Elimination

14). Which of the following statements related to SN1 reactions is NOT true?

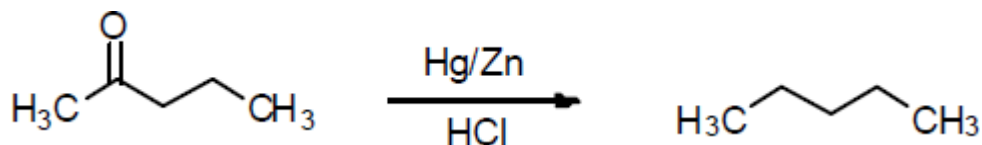
A).Nucleophiles are lewis acids

B).Carbocations are electrophilic

C).The charged carbon atom of a carbocation has an unfilled valence shell

D).The SN1 reaction can be described as a heterolytic bond cleavage followed by nucleophilic attack

15). Identify the following name reduction



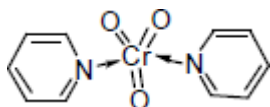
A).Birch reduction

B).wolf-Kishner reduction

C).Clemmensen reduction

D).Dakin reaction

16). Identify the following reagent?



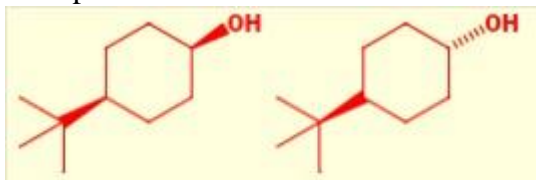
A).Coreys reagent

B).Collin's reagent

C).Jones reagent

D).Cornforth reagent

17). Stereoisomers shown below are a pair of



A).Enantiomers

B).Diastereomers

C).Epimers

D).Anomers

18).S_Ni reaction of optically active compound gives:

c)

A).Racemic product

B).Inversion of configuration

C).Retention of configuration

D).No product

19). Hexa-2,3,4-triene shows

A).Optical isomerism

B).Atropisomerism

C).Geometrical isomerism

D).Functional isomerism

20). Which of the following is an accurate statement of Hammond's postulate?

A).The transition state of an endothermic reaction will resemble the reactants more than the product

B).The transition state of an exothermic reaction will resemble the reactants more than the product

C).The transition state of an exothermic reaction will resemble the products more than the reactant

D).The difference in energy between the reactants and transition state controls the rate of reaction