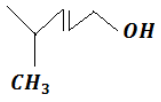
Bottom of Pyramid - Test # 13 - Organic Chemistry: Some Basic Principles & Techniques

Contact Number: 9667591930 / 8527521718

1.

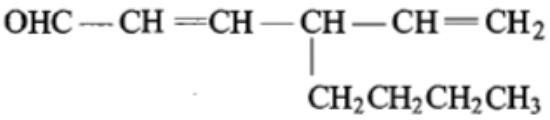
IUPAC name of  is:

(a) 5-methylhexanol (b) 2-methylhexanol

(c) 2-methylhex-3-enol (d) 4-methylpent-2-enol

2.

IUPAC name of,



is:

(a) 4-butyl-2,5-hexadien-1-al

(b) 5-vinyloct-3-en-1-al

(c) 5-vinyloct-5-en-8-al

(d) 3-butyl-1,4-hexadien-6-al

3.

But-2-ene exhibits cis-trans-isomerism due to

(a) rotation around C_2-C_3 double bond

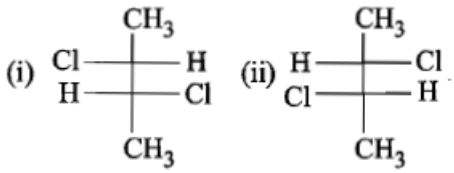
(b) rotation around C_3-C_4 sigma bond

(c) rotation around C_1-C_2 bond

(d) restricted rotation around C=C bond

4.

If optical rotation produced by the compound (i) is +52° then that produced by that the compound (ii) is:

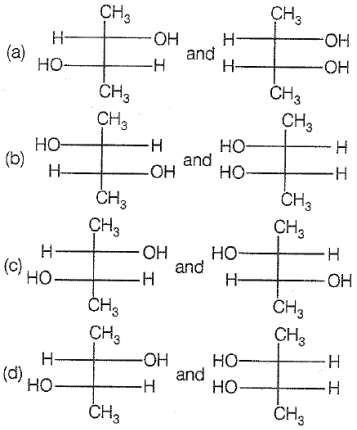


(a) -52° (b) +52°

(c) 0° (d) unpredictable

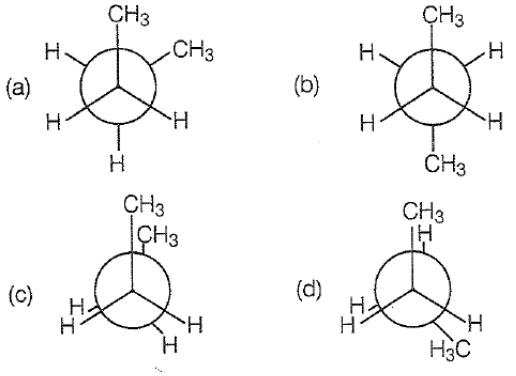
5.

Which of the following pairs are enantiomers?



6.

In the following, the most stable conformation of n-butane is



7.

Which of the following will exhibit chirality?

(1) 2-methyl hexane

(2) 3-methyl hexane

(3) Neopentane

(4) Isopentane

8.

The property by virtue of which a compound can turn the plane of polarization of light is known as:

(1) photolysis (2) phosphorescence

(3) optical activity (4) polarization

9.

In the following compounds

The order of acidity is

1. III>IV>I>II 2. I>IV>III>II

3. II>I>III>IV 4. IV>III>I>II

10.

The carbon-carbon bond length in the compounds

follows the order

1. III<II<I<IV

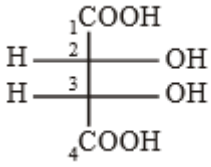
2. IV<I<II<III

3. I<II<III<IV

4. I<IV<III<II

11.

The configuration of given tartaric acid is



(1) 2R, 3R (2) 2R, 3S

(3) 2S, 3S (4) 2S, 3R

12.

Choose the correct statement

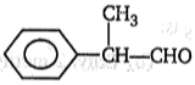
(1) I effect transfers e^- from one carbon atom to another

(2) I effect operates in both σ\p bond

(3) I effect creates not charge in molecule

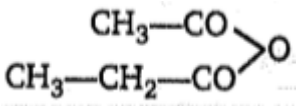
(4) I effect creates partial charges and it is distance dependent

13.

The IUPAC name of  is:

(a) 2-Phenylpropan-3-al (b) Formylethylbenzene

(c) 2-Phenylpropanal (d) Ethylformylbenzene

The IUPAC name of  is:

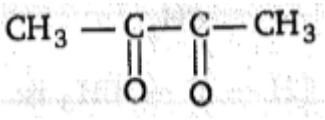
(a) Ethanoic propanoic anhydride

(b) Propanoic ethanoic anhydride

(c) 1-Ethanoyloxypropanone

(d) 3-Ethanoyloxypropan-3-one

15.

The IUPAC name of  is:

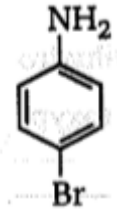
(a) Butane-2, 3-dial

(b) Butane-1, 3-dione

(c) Butane-2, 3-dione

(d) 1, 2-dimethylethanedione

16.

The IUPAC name of  is:

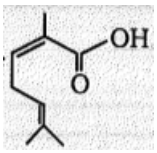
(a) 4-Bromo benzenamine

(b) 4-Amino-1-bromobenzene

(c) 4-Bromo benzenamide

(d) 1-Bromo benzencarboxamide

17.

The IUPAC name of  is:

(a) 2, 6-Dimethylhepta-2, 5-dienoic acid

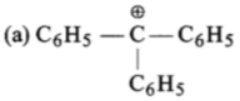
(b) 3, 7-Dimethylhepta-2, 5-dienoic acid

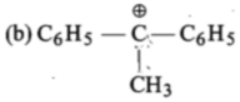
(c) 1-Hydroxy-2, 6-dimethylhepta-2, 5-dienone

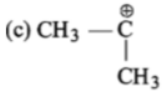
(d) none of these

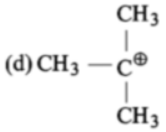
18.

The most stable carbocation is:

(a) 

(b) 

(c) 

(d) 

19.

The electromeric effect in organic compounds is a

(a) temporary effect

(b) permanent effect

(c) temporary-permanent effect

(d) none of the above

20.

The stability of 2,3-dimethyl but-2-ene is more than 2-butene. This can be explained in terms of:

(a) resonance

(b) hyperconjugation

(c) electromeric effect

(d) inductive effect

21.

$(CH_3)_4N+$ is neither an electrophile, nor a nucleophile because it:

(a) does not have electron pair for donation as well as cannot attract electron pair

(b) neither has electron pair available for donation nor can accommodate electron since all shells of N are fully occupied.

(c) can act as Lewis acid and base

(d) none of the above

22.

Which of the following is an electrophilic reagent?

(a) RO^-

(b) BF_3

(c) NH_3

(d) *RO*····H

23.

The-*I* effect is shown by:

(a) -COOH

(b) $-CH_3$

(c) $-CH_3CH_2$

(d) $-CHR_2$

24.

Sulphur trioxide is:

(a) an electrophile (b) a nucleophile

(c) a homolytic agent (d) a base

25.

Allyl isocyanide has:

(1 9σ and 4p -bonds.

(2)8σ and 5p -bonds

(3)9σ, 3p and 2 non-bonded electrons

(4) 8σ, 3p and 4 non-bonded electrons

26.

Buta-1,3-diene and But-2-yne are:

(a) position isomers

(b) functional isomers

(c) chain isomers

(d) tautomers

27.

Diastereomers can be separated by:

(a) Fractional distillation

(b) simple distillation

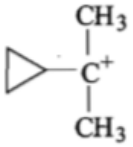
(c) electrophoresis

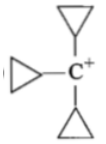
(d) all of these

28.

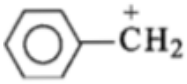
In the following carbocations, the most stabile carbocation:

(1) RCH_2C+H_3 (2)





(3)



(4)

29.

The number of optical isomers of pent-3-en-2-ol is:

(a) 2 (b) 4

(c) 8 (d) 16

30.

Geometrical isomerism is caused:

(a) by restricted rotation around C=C bond

(b) by the presence of one asymmetric carbon atom

(c) due to the different groups attached to the same functional group

(d) by swing of hydrogen atom between two polyvalent atoms.

31.

Which of the following is optically active?

(1) Alanine

(2) 2-butanol

(3) Lactic acid

(4) All of these

32.

Benzaldoxime exists in how many forms?

(a) 1

(b) 2

(c) 3

(d) 4

33.

Nitroethane can exhibit one of the following kind of isomerism:

(a) metamerism (b) optical activity

(c) tautomerism (d) position isomerism

34.

Number of possible isomers of glucose are:

(a) 10

(b) 14

(c) 16

(d) 20

35.

Isomerism among compounds due to migration of a proton is known as:

(a) geometrical (b) optical

(c) tautomerism (d) position

36.

The maximum number of stereoisomers possible for 3-hydroxy-2-methyl butanoic acid is:

(a) 1 (b) 2

(c) 3 (d) 4

37.

Maleic and fumaric acids are:

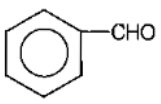
(a) tautomers (b) geometrical isomers

(c) chain isomers (d) functional isomers

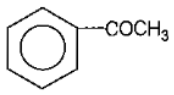
38.

Which one is most reactive towards nucleophilic addition reaction?

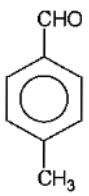
(a)



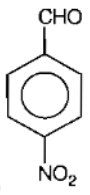
(b)



(c)

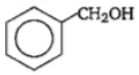
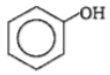
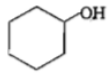
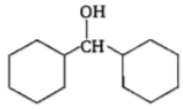


(d)



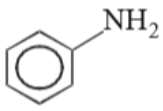
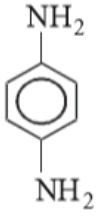
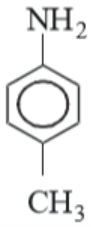
39.

Which one of the following has the most acidic nature?

(a) 
(b) 
(c) 
(d) 

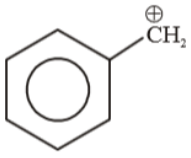
40.

Which of the following amines is the most basic

1. 
2. 
3. 
4. $CH_3—NH_2$

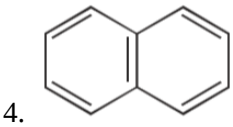
41.

Which of the following is the most stable carbocation?

1. 
2. 
3. $(CH_3)_3\overset{+}{C}$
4. $CH_2=CH-\overset{\oplus}{C}H_2$

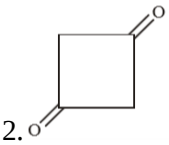
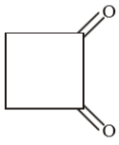
42.

The non-aromatic compound among the following is:

1. 
2. 
3. 
4.

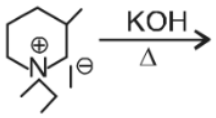
43.

Which of the following does not show tautomerism?

1. 
2. 
3. 
4. All of these

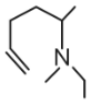
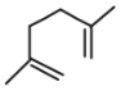
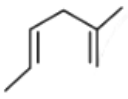
44.

Major product of the following reaction is



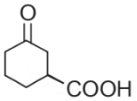
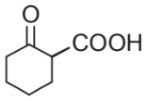
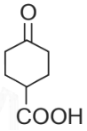
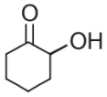
P (Major)

Major product P is

1. 
2. $CH_2 = CH_2$
3. 
4. 

45.

Which compound will decarboxylate most easily upon heating in acidic medium?

1. 
2. 
3. 
4. 

Fill OMR Sheet