



# CHEMISTRY

## BOOKS - MODERN PUBLICATION CHEMISTRY (KANNADA ENGLISH)

### UNIT TEST 4

#### Questions

1. The compound having maximum boiling point is :

A. n-Pentane

B. n-Hexane

C. 2,2- Dimethylpropane

D. 2-Methylabutane

**Answer: B**

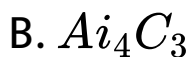


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2. A metallic carbide on treatment with water gives a colourless gas which burns readily in air and gives a red precipitate with  $Cu_2CI_2$

and  $NH_4OH$ .

The metal carbide is :



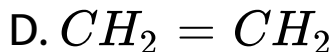
D. all

**Answer: A**



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3. Which of the following can undergo nucleophilic addition reactions ?



**Answer: C**



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4. Which of the following can be used to distinguish propene from propyne ?

A. alk.  $KMnO_4$

B.  $Br_2$  water

C. dil .  $H_2SO_4$

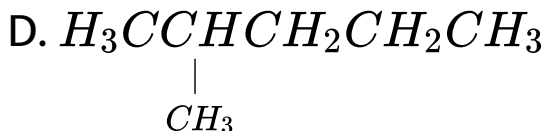
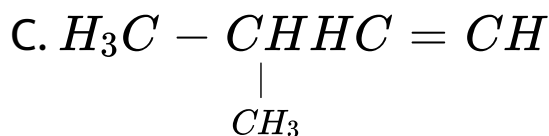
D. ammonical  $AgNO_3$

**Answer: D**



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5. Which of the following is most acidic



**Answer: C**



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6. cetane is :

A. Hexadecane

B. Iso - octane

C. Dodecane

D. n-Hexane

**Answer: A**



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7. Which of the following compound readily undergoes electrophilic substitution ?

A. Toluene

B. Nitrobenzene

C. Anisole

D. Benzoic acid.

**Answer: C**



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8. The molecule which has dipole moments is :

A. 2,2- Dimethylpropane

B. trans -2- Pentane

C. trans -3- hexane

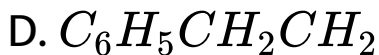
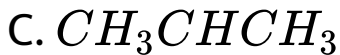
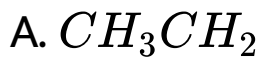
D. 2,2,3,3- Tetramethybutane .

**Answer: B**



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9. The most stable free radical is :



**Answer: B**



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**10.** The reagent required to convert 1-butyne to 2-butanone is :

A. alc. KOH

B.  $Hg^{2+}$  dil  $H_2SO_4$

C.  $ZnCl_2 + HCl$

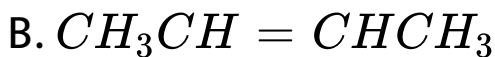
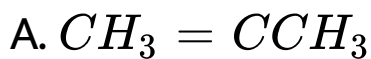
D. alk .  $KMnO_4$

**Answer: B**



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**11.** Which of the following reacts with an aqueous solution of  $[Ag(NH_3)_2]OH$ ?

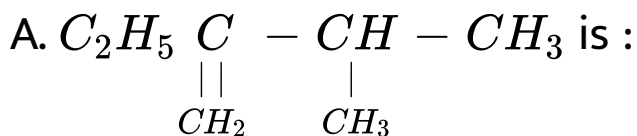


**Answer: D**



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**12. The IUPAC name of the compound**



B. 2-Ethyl -3- methyl -1- butene

C. Ethyl isopropylethane

D. 2-Ethyl-3- methyl -2- butene

**Answer: B**



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**13.** The order of appearance of the following with rising temperature during the refining of crude oil is :

A. kerosene oil gasoline diesel

B. diesel gasoline kerosene oil

C. gasoline diesel, kerosene oil

D. gasoline kerosene oil diesel

**Answer: D**



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**14.** When propyne is treated with aqueous  $H_2SO_4$  in presence of  $HgSO_4$ , the major product is

A. Propanal

B. n-Propyl hydrogen sulphate

C. Acetone

D. Propanol

**Answer: C**



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**15.** The reaction of toluene with chlorine in the presence of ferric chloride gives predominantly

A. benzyl chloride

B. m-chlorotoluene

C. benzoyl chloride

D. o- and p- chloro toluene

**Answer: D**



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**16.** An olefin was treated with ozone and the resulting product on hydrolysis gave 2-pentanone and acetaldehyde. The olefin is :



A. 2-Methyl -3- hexene

B. 3-Methyl -2- pentene

C. 3-Methyl -2- pentene

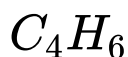
D. 2-Methyl -1- pentene

**Answer: C**



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**17.** Which of the following is not an isomer of



A. 2-buayne

B. 1-Butyne

C. 2-Methyl -1- propene

D. 1,3- Butadiene

**Answer: C**



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**18.** How many types of carbon - carbon bonds are present in 1-butyne ?

A. 4

B. 3

C. 2

D. 1

**Answer: B**



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**19.** When ethylene is bubbled through an aqueous solution of bromine containing

sodium chloride. The products formed is / are

:

A. 1,2 - Dibromoethane

B. 2-Bromo -1- chloroethane

C. 2- Bromoethanol

D. All the above three

**Answer: D**



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20. Which of the following is more reactive towards HBr ?

A. Ethylene

B. Propylene

C. iso - butylene

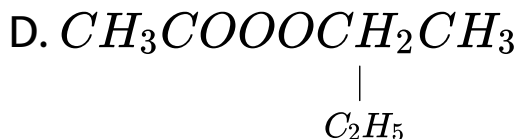
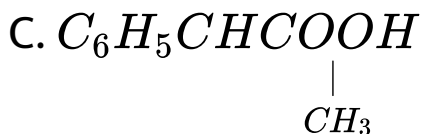
D. n-Butene

**Answer: C**



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21. Which of the following compound cannot exhibit optical activity ?

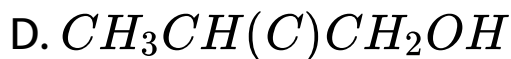
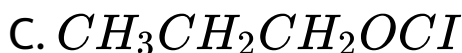
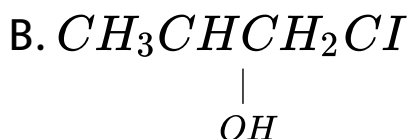


**Answer: D**



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22. The major product of the reaction :

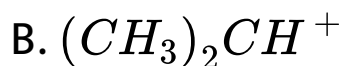
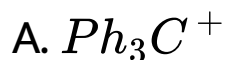


**Answer: B**



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23. Which of the following carbocations will be the most stable ?



**Answer: A**



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24. Alkaline  $KMnO_4$  converts ethylene into :

A. ethane

B. acetic acid

C. ethylene glycol

D. glycerol

**Answer: C**



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25. Ethylbenzene with bromine in the presence of  $FeBr_3$  gives :

A. 

B. 

C. 

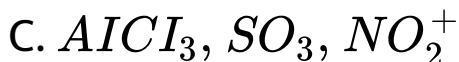
D. 

**Answer: D**



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26. Which of the following series contains electrophiles only ?

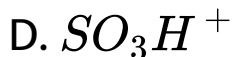


**Answer: C**



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27. The electrophile involved in the sulphonation of benzene is :



**Answer: A**



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28. 1,1,2,2 -Tetrabromoethane when heated with zinc and alcohol gives :

A. ethane

B. ethylene

C. acetylene

D. None of these

**Answer: C**



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29. The raw material used in Fischer Tropsch process for the manufacture of synthetic petroleum is :

A. Water gas

B. Water gas + excess hydrogen

C. Coal gas + hydrogen

D. Water gas + coal gas

**Answer: B**



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30. Dextro - tartaric acid and meso - tartaric acid are :

- A. enantiomers
- B. racemic mixture
- C. diastereomers
- D. stereoisomers

**Answer: C**



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31. The maximum number of monochloro derivatives possible for 2,6 -dimethylheptane is :

A. 4

B. 3

C. 5

D. 6

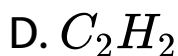
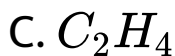
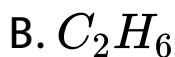
**Answer: A**



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32. In which of the following the H - C-H bond angle is the maximum ?



**Answer: D**



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**33.** A conjugated diene will have two double bonds in :

- A. isolated positions
- B. adjacent position
- C. alternate positions
- D. None of the above

**Answer: C**



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34. Geometrical isomerism is shown by :

A. 2-methyl -1-pentene

B. 3-Hexene

C. 2-Pentyne

D. 2,3- Dimethyl-2- butene

**Answer: B**



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**35.** In anti - configuration of n- butane the two methyl groups are at an angle of :

A.  $60^\circ$

B.  $45^\circ$

C.  $120^\circ$

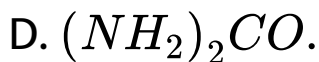
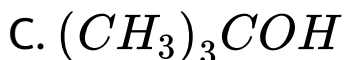
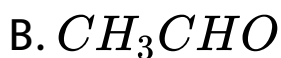
D.  $180^\circ$

**Answer: D**



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36. The compound in which C uses its  $sp^2$  hybrid orbitals for bond formation is :



**Answer: C**



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37. Which is most abundant hydrocarbon pollutant

A. methane

B. Ethane

C. Acetylene

D. Benzene

**Answer: A**



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**38.** An isomer of ethanol is :

- A. methanol
- B. dimethylether
- C. acetone
- D. diethylether .

**Answer: B**



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**39.** Natural rubber is a polymer derived from :

A. butadiene

B. vinyl bromide

C. isoprene

D. propylene

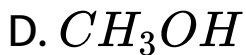
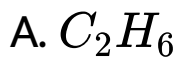
**Answer: C**



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**40.** Methyl magnesium bromide reacts with water to form :





**Answer: B**



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**41.** A fuel having high octane number contains mainly :

A. alkanes

B. straight chain alkanes

C. branched chain hydrocarbons

D. areanes

**Answer: C**



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**42.** The number of position isomers for an aromatic compound having the molecular formula  $C_8H_{10}$  is :

A. Four

B. Three

C. Two

D. Six .

**Answer: A**



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**43.** Which of the following is not an optically active compound ?

A. Alanine

B. Malic acid

C. Meso - tartaric acid

D. Lactic acid

**Answer: C**



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**44.** Which alkane would have only the primary and tertiary carbon ?

A. Pentane

B. 2,2- Dimethylbutane

C. 2,2- Dimethylpropane

D. 2-Methylbutane

**Answer: B**



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**45.** Iodination of alkanes is carried out in the presence of :

A. alk.  $KMnO_4$

B. nitric acid

C. carbon tetrachloride.

D. water

**Answer: B**



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**46.** Oxidation of propylbenzene in the presence of oxidising agent like potassium permanganate gives :

A. 

B. 

C. 

D. 

**Answer: A**



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**47.** The number of sigma and pi bonds in the molecule of tetracyanoethylene is :

- A. Nine  $\alpha$  and nine  $\pi$  bond
- B. Five  $\alpha$  and nine  $\pi$  bonds
- C. Nine  $\alpha$  and seven  $\pi$  bond
- D. Five  $\alpha$  and eighth  $\pi$  bonds

**Answer: A**



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**48.** Which of the following statements is not true ?



A. Alkynes show geometrical isomerism

B. Ethylene each carbon  $sp^2$  hybridisation  
of carbon

C. In benzene each carbon atom undergoes  
 $sp^2$  hybridisation

D. The molecular formulae of cyclobutane  
and butene are same .

**Answer: A**



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49. An important anti-knocking compound is :

- A. Tetraethyl lead
- B. Polyvinyl chloride
- C. Cetane
- D. Iso-octane.

**Answer: A**



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50. Acetylene on treatment with ozone followed by treatment with water gives :

A. acetic acid

B. glycol

C. glyoxal

D. glycerol

**Answer: C**



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51. The total number of structural isomers of  $C_4H_{10}O$  are :

A. 5

B. 6

C. 7

D. 8

**Answer: C**



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52. Addition of sulphur monochloride to ethene gives :

A. Ethyl sulphide

B. Epoxyethane

C. Mustard gas

D. Glycol

**Answer: C**



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53. A compound X with molecular formula  $C_6H_{10}$  on oxidation with hot  $KMnO_4$  gives hexandioic acid X is :

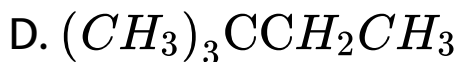
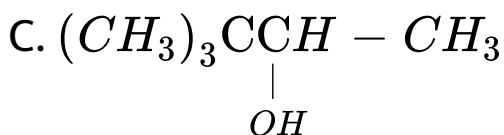
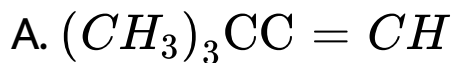
- A. 2-Hexyne
- B. 1,5- hexadiene
- C. 1,3- Hexadiene
- D. Cyclohexene.

**Answer: D**



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54. In the reaction the final product A is :



**Answer: C**



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55. Ethyne is liberated by the electrolysis of an aqueous solution of :

A. sodium ethanoate

B. sodium succinate

C. sodium fumarate

D. sodium fumarate

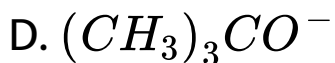
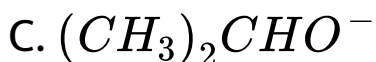
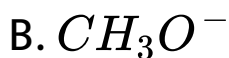
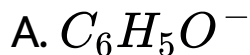
**Answer: C**



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56. The most reactive nucleophile among the following is :



**Answer: B**



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57. Most dangerous metal pollutant of automobile exhausts is

A. Mercury

B. Lead

C. Arsenic

D. Cadmium

**Answer: B**



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**58.** The best method for the separation of naphthalene and benzoic acid from their mixture is :



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**59.** 0.2 g of an organic compound containing C, H and O on combustion gave 0.147 g of  $CO_2$  and 0.12 g of water . The percentage content of oxygen in the compound is :

A. 73.29

B. 86.36

C. 83.46

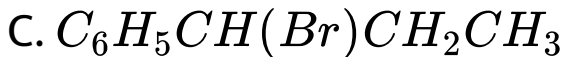
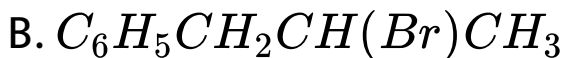
D. 74.92

**Answer: A**



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**60.** When 3-phenylpropene reacts with HBr in the presence of peroxide, the major product formed is



**Answer: B**



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