

## 12 CHEMISTRY CH #07 (Fundamental of Organic Chemistry)

NUST-NET + ECAT + NTS-NAT

PASS WORKSHEET

- Which of following is a functional group
  - Group of atom
  - Triple bond
  - Double bond
  - All of these
- Which of the following is not an organic compound
  - Glucose
  - Ammonium cyanate
  - Methane
  - None
- Number of carbon atoms increases the number of isomers also increase. These carbon compound pentane has as many as
  - 5 isomers
  - 3 isomers
  - 10 isomers
  - 6 isomers
- Which is the chain isomer of n-pentane
  - Isopentane

B. Neopentene

C. Isopentene

D. n-pentene

5. The geometric isomerism is caused by

A. The restricted rotation of pi bond

B. The presence of similar groups on a carbon atom

C. Free rotation of a pi bond

D. The presence of a triple bond in a compound

6. 1-chloropropane and 2 chloropropane are isomers of each other, the type of isomerism in these two is called:

A. Cis-trans isomerism

B. Position isomerism

C. Chain isomerism

D. Functional group isomerism

7. What usually does not dissolve in water

A. Lipids

B. Benzene

C. Paraffins

D. All of these

8. Which of the following is not heterocyclic?

A. Pyrole

B. Furan

C. Thiophene

D. Naphthalene

9. In homologous series, compound differ by

A. CH<sub>2</sub>

B. CH<sub>3</sub>

C. CH<sub>4</sub>

D. All

10. Pi bonds in ethene is / are

A. 1

C. 3

B. 2

D. 4

11. Which of the following is not inorganic

A. Diamond

B. Graphite

C. Synthetic rubber

D. Solid iodine

12. Which of the following is not a derivative of benzene

A. Pyrrole

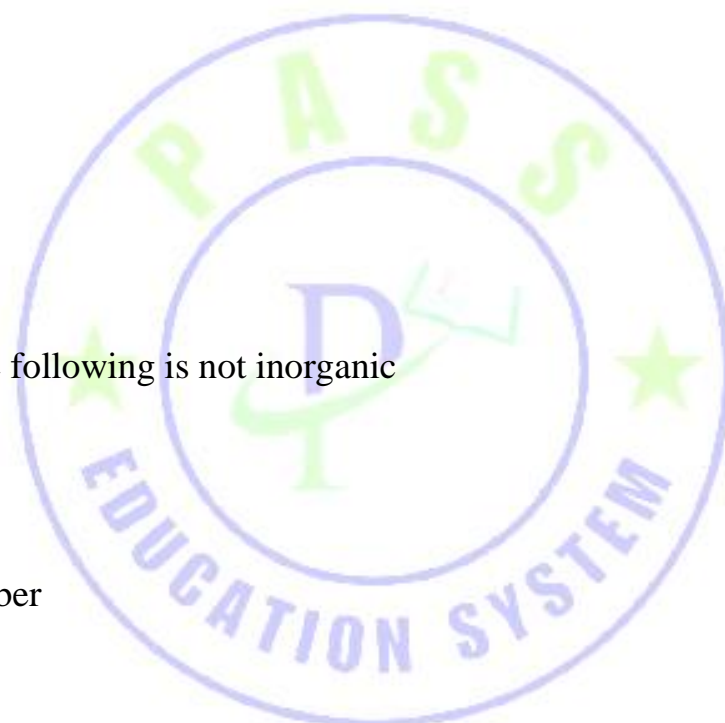
B. Furan

C. Thiophene

D. All

13. Coal tar contains many organic compounds that can be separated by

A. Destructive distillation



B. Fractional distillation

C. Vacuum distillation

D. Partial distillation

**14.** Large hydrocarbons are converted into smaller hydrocarbons by a process called as?

A. Reforming

B. Cracking

C. Distillation

D. Decomposition

**15.** What is the octane number of Iso-octane?

A. 40

B. 100

C. 0

D. 2

**16.** Propene exhibit

A. Cis-isomerism

C. Geometric isomerism

B. Trans-isomerism

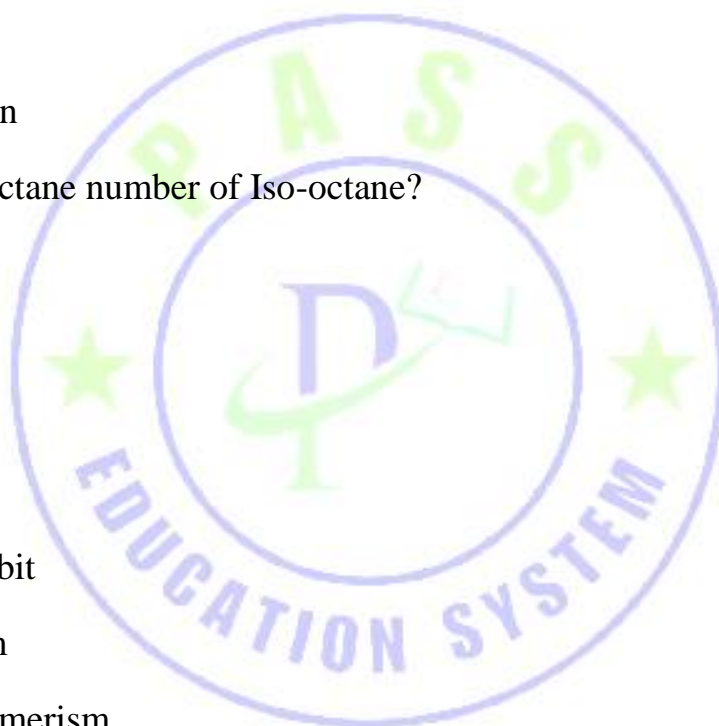
D. None

**17.** Cyclic compounds consist of except?

A. Alicyclic

B. Aromatic

C. Acyclic compounds



D. Carbocyclic compounds

**18.** Organic compounds in which tetravalency of carbon atom is satisfied are called as

- A. Saturated
- B. Unsaturated
- C. Alkenes
- D. Alkynes

**19.** Which type of organic compounds are present in natural gas?

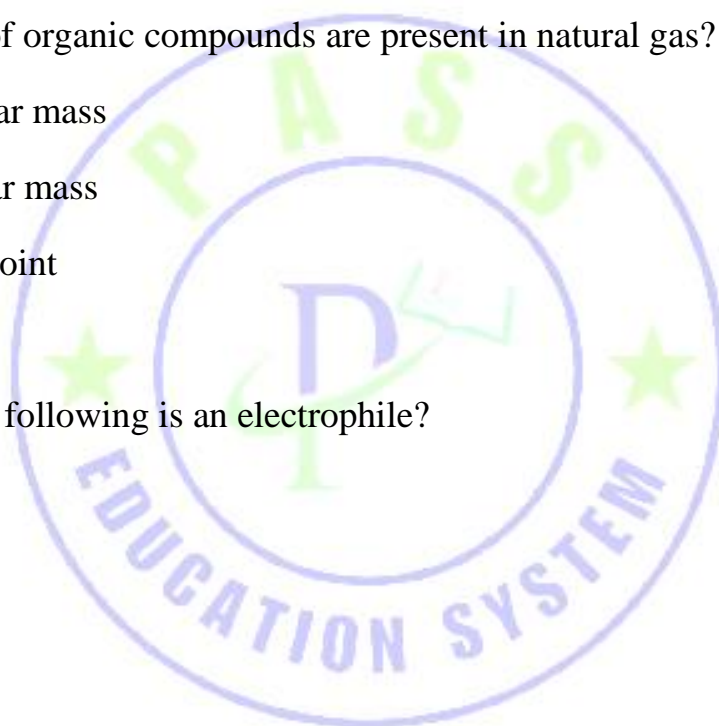
- A. High molecular mass
- B. Low molecular mass
- C. Low boiling point
- D. Both b and c

**20.** Which of the following is an electrophile?

- A.  $\text{Cl}^-$
- B.  $\text{H}_2\text{O}$
- C.  $\text{BF}_3$
- D.  $\text{NH}_3$

**21.** The removal of atoms or groups of atoms from adjacent carbon atoms to form a multiple bond is called:

- A. Substitution reactions
- B. Elimination reactions
- C. Rearrangement reactions
- D. Addition reactions



**22.** In geometric isomerism, the cis-isomers have all of the following properties EXCEPT:

- A. They are polar molecules
- B. They have high boiling points
- C. They are symmetrical molecules
- D. They have low melting points

**23.** Which of the following is/are basic conditions for geometric isomerism?

- A. Having Carbon - Carbon double bond
- B. Different groups are attached with carbon containing double bond
- C. Double bond involves free rotation
- D. Both A and B

**24.** In 1,3-Butadiene the number of sigma and pi-bonds are:

- A. 9-sigma bonds and 2-pi bonds
- B. 8-sigma bonds and 2-pi bonds
- C. 7-sigma bonds and 1-pi bond
- D. 9-sigma bonds and 1-pi bond

**25.** Which of the following represents the functional group of acidic amides?

- A. -COOR
- B. - C=N
- C. -NH<sub>2</sub>
- D. -CONH<sub>2</sub>

**26.** Which of the following is a cycloalkane?

- A. C<sub>4</sub>H<sub>10</sub>

B. C<sub>6</sub>H<sub>12</sub>

C. CH<sub>10</sub>

D. C<sub>6</sub>H<sub>8</sub>

**27.** Butyl alcohol shows number of possible isomers:

A. 3

B. 5

C. 4

D. 6

**28.** An atom or group of atoms which confers characteristic property to an organic compound is called:

A. Heteroatom

B. Chemical bond

C. Functional group

D. Empirical group

**29.** Which one of the following is a heterocyclic compound?

A. Pyridine

B. Phenol

C. Cyclohexanol

D. Anthracene

**30.** Which of the following has linear geometry?

A. Ethane

B. Ethene

C. Ethyne

D. Ethanol

**31.** Ether shows the phenomenon of:

- A. Position isomerism
- B. Metamerism
- C. Functional group isomerism
- D. Cis-trans isomerism

**32.** Cracking problem of fuel combustion can be avoided by:

- A. Reforming
- B. Improving octane number
- C. Adding TEL
- D. All of the above

**33.** Octane number of n heptane is

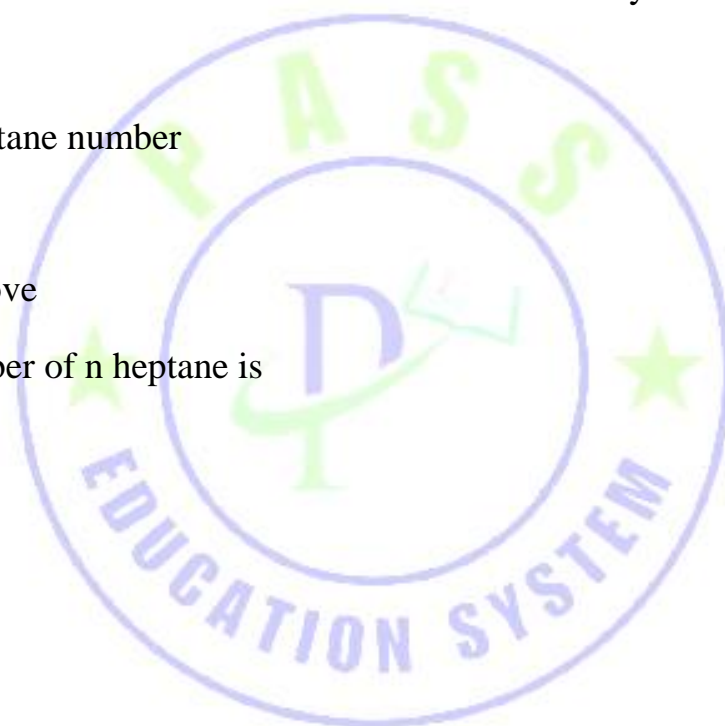
- A. 0
- B. 1
- C. 50
- D. 100

**34.** Organic compounds are

- A. Cyclic and acyclic
- B. Open chain and acyclic
- C. Closed chain and cyclic
- D. Aliphatic and open chain

**35.** What is the common name of the compound?

- A. Chloropentane





B. n-Pentyl chloride

C. n- Chloropentane.

D. 1-Chloropentane

**36.** How many chain isomers of Pentane is possible?

A. Two

B. Four

C. Three

D. Five

**37.** Friedrich Wohler prepared UREA from

A. Amino acids

B. Ammonium carbonate

C. Ammonium cyanate

D. Xanthin

**38.** The smallest alkane that shows isomerism is

?

A. Ethane

B. Butane

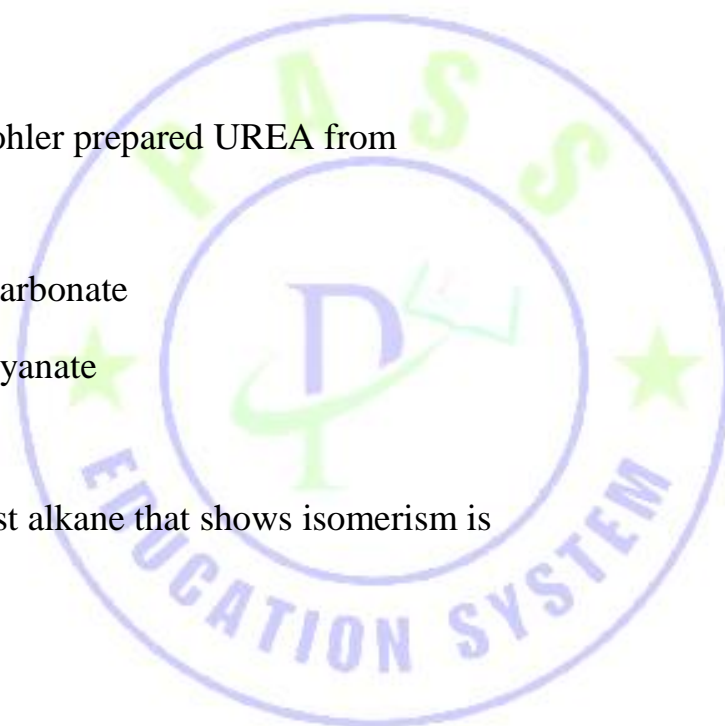
C. Pentane

D. Isopropane

**39.** An atom or group of atom that gives specific properties to the compound is called?

A. Functional groups

B. Alkane



C. Homologous series

D. Atoms

**40.** Ammonia Contains which type of Hybridization ?

A. sp

B. sp<sup>2</sup>

C. sp<sup>3</sup>

D. sp<sup>2</sup>-d

**Answers**

1 d 2 a 3 a 4 a 5 a 6 c 7 d 8 d 9 a 10 a 11 c 12 d

13 b 14 b 15 b 16 d 17 c 18 a 19 b 20 c 21 b 22 c 23 d 24 b

25 a 26 d 27 b 28 c 29 c 30 a 31 c 32 d 33 a 34 a 35 c 36 c

37 c 38 b 39 a 40 c