**1. The isomeric pair is**

A. Ethane and propane

B. Propane and butane

C. Ethane and ethane

D. Butane and 2-methylpropane

D

**2. Which of the given is used to oxidise ethanol to ethanoic acid?**

A. Alkaline KMnO₄

B. Conc. H₂SO₄

C. Acidified K₂Cr₂O₇

D. All of these

D

**3. Which is denatured spirit?**

A. Ethanol only

B. Ethanol and methanol (50%)

C. Ethanol and methanol (5%)

D. Methanol only

C

**4. Tertiary butanol gets oxidised with oxidising agents like alkaline KMNO₄ to**

A. Isobutane

B. Ter-butyl alcohol

C. Secondary-propyl alcohol

D. All of these

B

**5. The substance not responsible for the hardness of water is**

A. Sodium nitrate

B. Calcium hydrogen carbonate

C. Calcium carbonate Magnesium carbonate

A

**6. The by product of soap is**

A. Isoprene

B. Glycerol

C. Butene

D. Ethylene glycol

B

**7. Covalent compounds**

A. Have high melting and boiling point

B. Are mostly soluble in water

C. Are formed between atoms of metals and non-metals

D. Are formed by the sharing of electrons in the bonding atoms

D

**8. Vinegar is a solution of**

A. 30% - 40% acetic acid in alcohol

B. 5% - 8% acetic acid in alcohol

C. 5% - 8% acetic acid in water

D. 15% -20% acetic acid in water

C

**9. Which of the given can be used for the denaturation of ethyl alcohol?**

A. Methyl alcohol

B. Pyridines

C. Copper sulphate

D. All of these

D

**10. Soaps are formed by saponification of**

A. Alcohols

B. Glycosides

C. Simple esters

D. Carboxylic acids

C

**11. Carbon exists in the atmosphere in the form of**

A. Only carbon monoxide

B. Carbon monoxide in traces and carbon dioxide

C. Only carbon dioxide

D. Coal

C

**12. Which of the following statements are usually correct for carbon compounds? These**

**(a) Are good conductors of electricity.**

**(b) Are poor conductors of electricity.**

**(c) Have strong forces of attraction between their molecules.**

**(d) Do not have strong forces of attraction between their molecules.**

A. (A) & (C)

B. (B) & (C)

C. (A) & (D)

D. (B) & (D)

D

**13. A molecule of ammonia (NH₃) has**

A. Only single bonds

B. Only double bonds

C. Only triple bonds

D. Two double bonds and one single bond

A

**14. Buckminsterfullerene is an allotropic form of**

A. Phosphorus

B. Sulphur

C. Carbon

D. Tin

C

**15. Which of the given is not an aliphatic hydrocarbon?**

A. Ethene

B. Ethane

C. Propyne

D. Benzene

D

**16. "In the given reaction, alkaline KMnO₄ acts as: CH₃ + CH₂ + OH ⟶Alkaline KMO₄ + Heat ⟶ CH₃ + COOH**"

A. Reducing agent

B. Oxidising agent

C. Catalyst

D. Dehydrating agent

B

**17. Oils on treating with hydrogen in the presence of palladium or nickel catalyst form fats. This is an example of**

A. Addition reaction

B. Substitution reaction

C. Displacement reaction

D. Oxidation reaction

A

**18. In which of the given compounds -OH is the functional group?**

A. Butanone

B. Butanol

C. Butanoic

D. Butanal

B

**19. The soap molecule has a \_\_ Hydrophilic head and a**

A. hydrophobic tail

B. Hydrophobic head and a hydrophilic tail

C. Hydrophobic head and a hydrophobic tail

D. Hydrophilic head and a hydrophilic tail

A

**20. Identify the unsaturated compounds from the following.**

**(a) Propane**

**(b) Propene**

**(c) Propyne**

**(d) Chloropropane**

A. (A) & (B)

B. (B) & (D)

C. (C) & (D)

D. (B) & (C)

D

**21. Complete combustion of a hydrocarbon gives**

A. CO+H₂O

B. CO₂+H₂O

C. CO+H₂

D. CO₂+H₂

B

**22. Which is not correct for isomers of a compound?**

A. They differ in physical properties

B. They differ in chemical properties

C. They have same molecular formula

D. They have same structural formula

D

**23. Buckminsterfullerene is an example of……………of carbon**

A. An isomer

B. An isotope

C. An allotrope

D. A functional group

C

**24. Who prepared urea the first time by heating ammonium cyanate?**

A. Wohler

B. Lavosier

C. Fuller

D. Haber

A

**25. Butanone is a four-carbon compound with the functional group \_\_\_\_\_\_**

A. Carboxylic acid

B. Aldehyde

C. Ketone

D. Alcohol

C

**26. Mineral acids are stronger acids than carboxylic acids because**

**(a) Mineral acids are completely ionised**

**(b) Carboxylic acids are completely ionised**

**(c) Mineral acids are partially ionised**

**(d) Carboxylic acids are partially ionised**

A. (A) & (D)

B. (B) & (C)

C. (A) & (B)

D. (C) & (D)

A

**27. Carbon forms four covalent bonds by sharing its four valence electrons with four univalent atoms, e.g. hydrogen. After the formation of four bonds, carbon attains the electronic configuration of**

A. Helium

B. Neon

C. Argon

D. Krypton

B

**28. Major constituent of LPG is……………**

**A. Ethene**

B. Butane

C. Propane

D. Pentane

B

**29. Which of the given does not belong to the same homologous series?**

A. CH₄

B. C₂H₆

C. C₃H₈

D. C₄H₈

D

**30. The name of the compound, CH₃ ─ CH₂ ─ CHO is:**

A. Propanal

B. Propanone

C. Ethanol

D. Ethanal

A

**31. The heteroatoms present in CH₃ ─ CH₂ ─ O ─ CH₂ ─ CH₂Cl are:**

**(a) Oxygen**

**(b) Carbon**

**(c) Hydrogen**

**(d) Chlorine**

A. (A) & (B)

B. (B) & (C)

C. (C) & (D)

D. (A) & (D)

D

**32. The first member of alkyne homologous series is:**

A. Ethyne

B. Ethene

C. Propyne

D. Methane

A

**33. Which of the given is a noble gas?**

A. Carbon

B. Argon

C. Nitrogen

D. Hydrogen

B

**34. How many electrons are there in the outermost shell of carbon?**

A. 1

B. 2

C. 3

D. 4

D

**35. Which allotrope of carbon is in the form of the geodesic globe?**

A. Graphite

B. Diamond

C. Fullerene

D. Carbon nanotube

C

**36. Which of the given has a triple bond?**

A. Hydrogen molecule

B. Oxygen molecule

C. Nitrogen molecule

D. Ammonia molecule

C

**37. Which of the given has a double bond?**

A. Hydrogen molecule

B. Oxygen molecule

C. Nitrogen molecule

D. Methane molecule

B

**38. How many single bonds are present in methane?**

A. Four

B. Five

C. Six

D. Three

A

**39. Subsequent members of homologous series differ by how many atomic mass units?**

A. 14

B. 16

C. 24

D. 28

A

**40. How many carbon atoms are present in one molecule of ethanoic acid?**

A. One

B. Two

C. Three

D. Four

B

**41. How many carbon atoms are present in one molecule of ethanol?**

A. One

B. Two

C. Three

D. Four

B

**42. Functional group – COOH is present in which of the given?**

A. Carboxylic acid

B. Alcohol

C. Aldehyde

D. Ketone

A

**43. Functional group – CHO is present in which of the given?**

A. Carboxylic acid

B. Alcohol

C. Aldehyde

D. Ketone

C

**44. A hydrocarbon should have a minimum of how many carbon atoms to show isomerism?**

A. Three

B. Four

C. Five

D. Six

B

**45. Ethanol reacts with sodium and forms two products. These are**

A. Sodium ethanoate and hydrogen

B. Sodium ethanoate and oxygen

C. Sodium ethoxide and hydrogen

D. Sodium ethoxide and oxygen

A

**46. Vinegar is a solution of**

A. 50% – 60% acetic acid in alcohol

B 5% – 8% acetic acid in alcohol

C. 5% – 8% acetic acid in water

D. 50% – 60% acetic acid in water

D

**47. Which of the given represents a saponification reaction?**

A. CH₃COONa + NaOH + CaO → CH₄ + Na₂CO₃

B. CH₃COOH + C₂H₅ + H₂SO₄ → CH₃COOC₂H₅ + H₂O

C. 2CH₃COOH + 2Na → 2CH₃COONa + H₂

D. CH₃COOC₂H₅ + NaOH → CH₃COONa + C₂H₅OH

D

**48. Which of the given is an odd compound?**

A. Ethene

B. Ethane

C. Propene

D. Acetylene

B

**49. Which one of the given is an unsaturated hydrocarbon?**

A. Acetylene

B. Butane

C. Propane

D. Decane

A

**50. Two neighbours of homologous series differ by**

A. \_CH

B. \_CH₂

C. \_CH₃

D. \_CH₄

B