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CARBON AND ITS COMPOUND PYQs (2014-2024)



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7. Which one of the following is **not** an allotrope of carbon?

- (a) Coal
- (b) Diamond
- (c) Graphite
- (d) Graphene



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Which one of the following is **not** true for diamond?

- (a) Each carbon atom is linked to four other carbon atoms
- (b) Three-dimensional network structure of carbon atoms is formed
- (c) It is used as an abrasive for sharpening hard tools
- (d) It can be used as a lubricant



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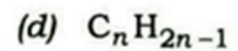
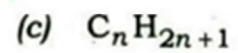
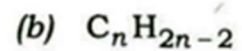
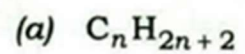
Which one among the following is used in making lead pencils ?

- (a) Charcoal
- (b) Graphite
- (c) Coke
- (d) Carbon black



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6. Which of the following is the general formula for saturated hydrocarbons?





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5. The compound $C_7H_7NO_2$ has

- (a) 17 atoms in a molecule of the compound
- (b) equal molecules of C and H by mass
- (c) twice the mass of oxygen atoms compared to nitrogen atoms
- (d) twice the mass of nitrogen atoms compared to hydrogen atoms



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26. Which one of the following is **not** true for the form of carbon known as diamond?

- (a) It is harder than graphite.
- (b) It contains the same percentage of carbon as graphite.
- (c) It is a better electric conductor than graphite.
- (d) It has different carbon to carbon distance in all directions.



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112. The number of saturated and unsaturated bonds in cyclohexane are :

- (a) 9 and 0 respectively.
- (b) 18 and 3 respectively.
- ☒ (c) 18 and 0 respectively.
- (d) 9 and 3 respectively.



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40. Which one of the following statements is correct about diamond and graphite ?

- (a) Diamond and graphite have similar physical and chemical properties.
- (b) Diamond is hard but graphite is smooth and slippery.
- (c) Diamond and graphite are both non-conductors of electricity.
- (d) Both diamond and graphite have similar structures.



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34. The correct order of octane number of butane, pentane, hexane and cyclohexane is

- (a) butane > pentane > hexane > cyclohexane
- (b) butane > pentane > cyclohexane > hexane
- (c) butane > cyclohexane > pentane > hexane
- (d) cyclohexane > butane > pentane > hexane



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36. Methanol is toxic because

- (a) methanol coagulates the protoplasm
- (b) methanol gets oxidised to methanal in liver which coagulates the protoplasm
- (c) methanol gets oxidised to acetic acid in liver which coagulates the protoplasm
- (d) methanol gets oxidised to CO in liver which coagulates the protoplasm



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78. Which of the following catalytic systems is used for the reduction of unsaturated hydrocarbon to saturated hydrocarbon?

- (a) Copper and H_2
- (b) Iron and H_2
- (c) Zinc and H_2
- (d) Nickel and H_2



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54. In which of the following, functional group isomerism is **not** possible?

- (a) Alcohols
- (b) Aldehydes
- (c) Alkyl halides
- (d) Cyanides



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113. In graphite, each carbon atom is bonded to three other carbon atoms

- (a) forming a three-dimensional structure
- (b) in the same plane giving a hexagonal array
- (c) in the same plane giving a square array
- (d) in the same plane giving a pentagonal array