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14.	The Kjeldahl's method for the estimation of nitrogen can be used to estimate the amount of nitrogen in which one of the following compounds? (2022) (a) (b)		(b) (c) (d) (d)
		18.	Paper chromatography is an example of :
	(c) $NH_2$ (d) N = N	19.	<ul> <li>(a) Partition chromatography</li> <li>(b) Thin layer chromatography</li> <li>(c) Column chromatography</li> <li>(d) Adsorption chromatography</li> <li>(d) Adsorption chromatography</li> <li>A tertiary butyl carbocation is more stable than a secondary butyl carbocation because of which of the following? (2020)</li> <li>(a) +R effect of - CH<sub>3</sub> groups</li> </ul>
15.	The correct IUPAC name of the following compound is: (2022) CI OH Br	20.	<ul> <li>(b) -R effect of - CH<sub>3</sub> groups</li> <li>(c) Hyperconjugation</li> <li>(d) -I effect of -CH<sub>3</sub> groups</li> <li>A liquid compound (x) can be purified by steam distillation only if it is (2020 Covid Re-NEET) </li> <li>(a) Not steam volatile, miscible with water</li> </ul>
16. 17.	(a) 1-bromo-5-chloro-4-methylhexan-3- ol (b) 6-bromo-2-chloro-4-methylhexan-4- ol (c) 1-bromo-4-methyl-5-chlorohexan-3- ol (d) 6-bromo-4-methyl-2-chlorohexan-4- ol The compound which shows metamerism is: (2021) (a) $C_3H_80$ (b) $C_3H_60$ (c) $C_4H_{10}0$ (d) $C_5H_{12}$ The correct structure of 2, 6-Dimethyl- dec-4-ene is: (2021) (a)	21. 22.	(b) Steam volatile, miscible with water (c) Not steam volatile, immiscible with water (d) Steam volatile, immiscible with water The number of sigma ( $\sigma$ ) and pi ( $\pi$ ) bonds in pent-2-en-4-yne is (basic concept) (2019) (a) 10 $\sigma$ bonds and 3 $\pi$ bonds (b) 8 $\sigma$ bonds and 5 $\pi$ bonds (c) 11 $\sigma$ bonds and 2 $\pi$ bonds (d) 13 $\sigma$ bonds and no $\pi$ bonds Which of the following molecules represents the order of hybridization $sp^2, sp^2, sp, sp$ from left to right atoms? (2018) (a) $HC \equiv C - C \equiv CH$ (b) $CH_2 = CH - C \equiv CH$ (c) $CH_3 - CH = CH - CH_3$ (d) $CH_2 = CH - CH = CH_2$



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31. (a) 18.20 In which of the following compounds, the (b) 16.76 C - Cl bond ionization shall give most (c) 15.76 (d) 17.36 stable carbonium ion? 34. (2015)The number of structural isomers (a) possible from the molecular formula H<sub>3</sub>C  $C_3H_9N$  is: (2015 Re) (a) 3 (b) 4 (c) 5 (d) 2 H<sub>2</sub>C 35. Which of the following species contains equal number of  $\sigma$ -bonds and  $\pi$ -bonds? (b) (2015)CH-Cl (a)  $(CN)_2$ (b)  $CH_2(CN)_2$ (c)  $HCO_3^-$ (d)  $XeO_4$ (c) 36. The enolic form of ethyl acetoacetate as shown below has (2015)`c—ci  $\begin{array}{c} & \overset{\mathbf{H}}{\overset{\mathbf{C}}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}}{\overset{\mathbf{C}}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}{\overset{\mathbf{C}}}}}{\overset{\mathbf{C}}{\overset{\mathcal{C}}{\overset{\mathcal{C}}{\overset{\mathcal{C}}{\overset{\mathcal{C}}{\overset{\mathcal{C}}}{\overset{\mathcal{C}}{\overset{\mathcal{C}}{\overset{\mathcal{C}}{\overset{\mathcal{$ (d) H<sub>3</sub>C H C - Cl OC,H, (a) 9  $\sigma$ -bonds and 2  $\pi$ -bonds (b) 9  $\sigma$ -bonds and 1  $\pi$ -bonds (c) 18  $\sigma$ -bonds and 2  $\pi$ -bonds 32. Which of the following is the most correct (d) 16  $\sigma$ -bonds and 1  $\pi$ -bonds electron displacement for a nucleophilic 37. In the Kjeldahl's method for estimation of reaction to take place? (2015)nitrogen present in a soil sample, (a) ammonia evolved from 0.75 g of sample  $H_3C \leftarrow C = C - C - C H_4$ neutralized 10 mL of 1  $MH_2SO_4$ . The percentage of nitrogen in the soil is (2014) (b) (a) 45.33 (b) 35.33  $H_{3}C \rightarrow C = C - C - C$ (c) 43.33 (d) 37.33 38. The structure of isobutyl group in an organic compound is: (2013)(c) (a) CH<sub>3</sub> CH-CH<sub>2</sub> (d) (b)  $H_3C \rightarrow C = C - C$ CH<sub>3</sub>—CH—CH<sub>2</sub>—CH<sub>3</sub> (c) 33. In Duma's method for estimation of  $CH_3$ — $CH_2$ — $CH_2$ — $CH_2$  nitrogen, 0.25 g of an organic compound (d) gave 40 mL of nitrogen collected at 300 K CH<sub>3</sub>—C temperature and 725 mm pressure. If the aqueous tension at 300 K is 25 mm, the percentage of nitrogen in the compound

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322

is:



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