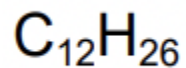
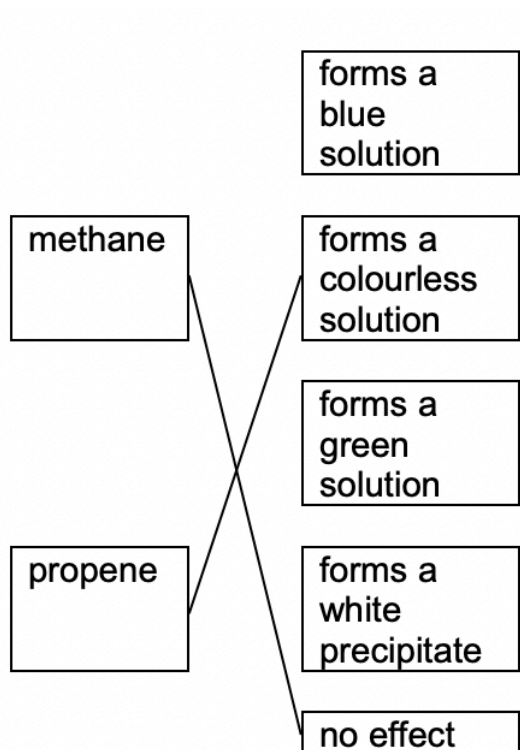


(Alkenes (double bonds, reactions, test with bromine water))

Q1. (2018)



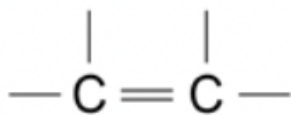
Q2.(2019)



Q3.(2019)

covalent

Q4.(2019)



Q5.(2020)

cracking

fractional distillation

Q6.(2020)

(remains) orange**(becomes) colourless**

Q7.(2022)

a catalyst**steam**

Q8.(2023)

Symbol for element	Name of element	Number of atoms of element in one molecule of propene
C	carbon	3
H	hydrogen	6

Q9.a)(2023)

(percentage of titanium = $100 - 3.0 - 2.5 = 94.5$ (%))

$$(\text{mass}) = \frac{94.5}{100} \times 5.0$$

$$= 4.725 \text{ (kg)}$$

alternative approach:

$$(\text{mass of Al} + \text{V} = \frac{5.5}{100} \times 5.0 =) \\ 0.275 \text{ (kg) (1)}$$

$$(\text{mass of titanium} =) 5 - 0.275 \\ (1)$$

$$= 4.725 \text{ (kg) (1)}$$

Q9.b)(2023)

(both are) strong

Q9.c)(2023)

tin is toxic

Q10.(2024)

colourless

Q11.(2024)

