

M.Sc.
Sem
II

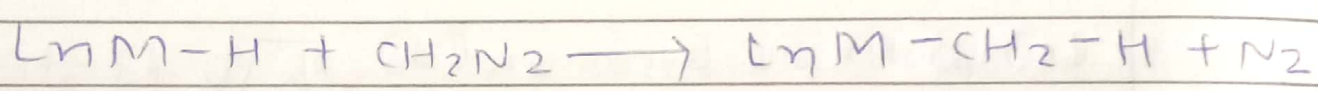
1 Which is the Homoleptic organometallic compounds?

- (a) $TaCl_2(CH_3)_3$
- (b) $W(CH_3)_6$
- (c) $TiCl_2(CH_3)_2$
- (d) $(CO)_5Mn-CH_3$

2 which compound is Heteroleptic?

- (a) $TaCl_2(CH_3)_3$
- (b) $TiCl_2(CH_3)_2$
- (c) Both
- (d) Both are not

3 consider the following reaction



- (a) Insertion reaction
- (b) oxidative reaction
- (c) Free radical reaction
- (d) Not

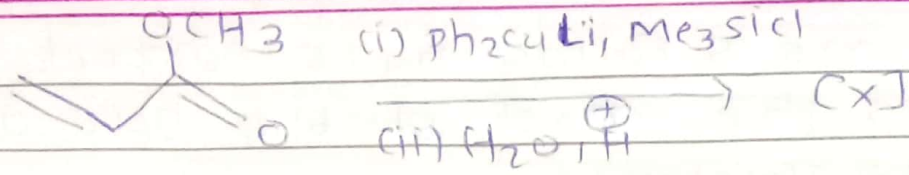
4 The colour of $Ti(CH_3)_4$ is

- (a) black
- (b) red
- (c) yellow
- (d) blue

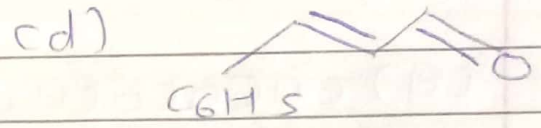
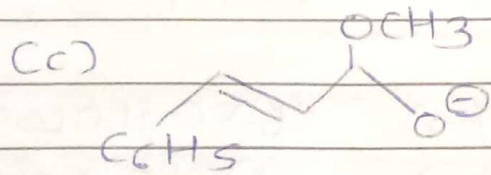
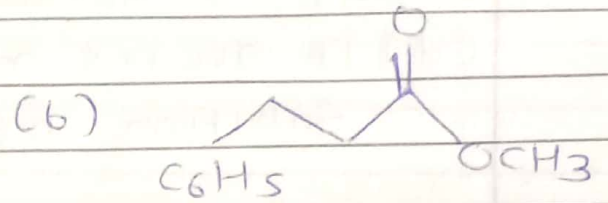
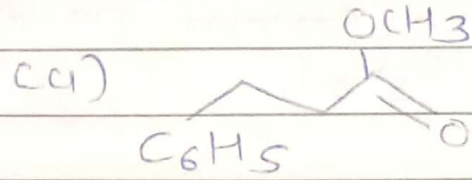
5 Which one of the following is not correct?

- (a) $W(CH_3)_6$ is dark-red
- (b) $W(CH_3)_6$ explodes in air
- (c) $W(CH_3)_6$ is green-coloured
- (d) all of this are not

6



[X] will be



7

What is the time scale value of NMR spectroscopy?

(a) 10^{-2} to 10^{-9}

(b) 10^{-1} to 10^{-8}

(c) 10^{-16} to 10^{-9}

(d) $>10^{-2}$

8

What is the approximate time scale for x-ray diffraction?

(a) 10^{-20}

(b) 10^{-18}

(c) 10^{-15}

(d) 10^{-13}

9

Which is considered the value 10^7 ?

(a) NMR

(b) ESR

(c) NQR

(d) Mossbauer

10 which one is following is correct for $AuCl_3$

(a) It is the most stable gold alkyl
 (b) It is unstable
 (c) It is yellow polymeric solid
 (d) It occurs in stable form in ethereal solution below $-35^\circ C$

11 $Cu(CH_3)(PPh_3)_3 + CO \rightarrow [x] ?$

(a) $Cu(COCH_3)_2(PPh_3)$ (b) $Cu(COCH_3)(PPh_3)_3$
 (c) $Cu_2(COCH_3)(PPh_3)_3$ (d) NO reaction

12 Arrange the alkyl halide substrate in decreases in the order

- (1) CH_3-CH_2-I (2) CH_3-CH_2-Cl
 (3) CH_3-CH_2-Br (4) CH_3-CH_2-F

codes:

- (a) $3 > 2 > 1$ (b) $1 > 3 > 2$
 (c) $4 > 1 > 2$ (d) $2 > 3 > 1$