# FIRST TERM EXAMINATION:2025
## CHEMISTRY- Answer Key

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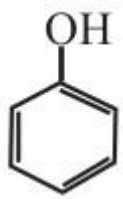
1. keto
2. C
3. D
4. B

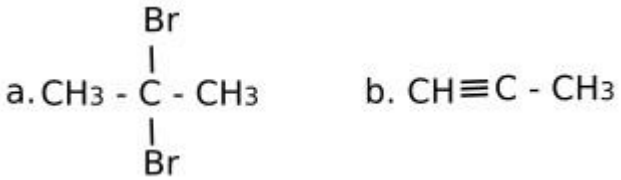
5. 

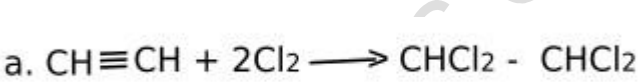
Phenol

6. a. When hydrocarbons burn, they combine with oxygen in air to form $CO_2$ and $H_2O$ along with heat and light. This process is called combustion.
   b. X – $CO_2$ & $H_2O$

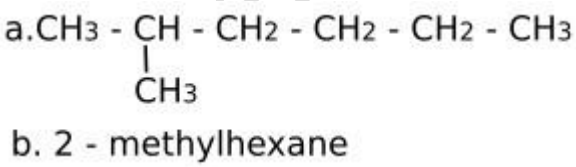
7A. . $CH_3 – CH_2 – CH_2 – OH$
   b. Propanol

7B. a. $CH_3 – CH_2 – CH_2 – CH_2 – CH_2 – COOH$
   b. Pentanoic acid

8. 


9. 

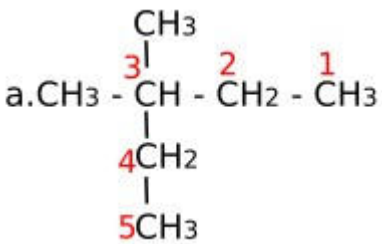
   b. $CHCl_2 – CHCl_2$ : 1,1,2,2 tetrachloroethane

10. 

   b. 2 - methylhexane

11A. i.Common Name: tefflon  ii. IUPAC Name:Poly tetrafluoroethene

11B. a. Monomers: Adipic acid and Hexamethelenediamine.  b. It is used for making fabrics

12. 

   b. 3  c. 3,3 – dimethylpentane

13A. a. Aldehides
b.1: Ethanal 2. Propanal
c. $CH_3 – CO – CH_3$

13B. a. Pentan – 2 – one: $CH_3 – CO – CH_2 – CH_2 – CH_3$
Pentan – 3 – one: $CH_3 – CH_2 – CO – CH_2 – CH_3$
b. ketones
c. $CH_3 – CH_2 – CH_2 – CH_2 – CHO$

14. a.i. Methanol can be prepared by treating carbon monoxide with hydrogen in the presence of catalyst at 573 K temperature
ii. Ethanoic acid can be prepared by treating methanol with carbon monoxide in the presence of a catalyst.
b. $CH_3 – OH + CO \rightarrow CH_3 – COOH$

15. a. Ester
b. $CH_3 – CH_2 – CH_2 – COOH + HO – CH_2 – CH_3 \rightarrow CH_3 – CH_2 – CH_2 – COO – CH_2 – CH_3 + H_2O$
c. Ethylbutanoate

16A. a. $1s^2$ $2s^2$ $2p^6$ $3s^2$ $3p^5$ b. 2s & 2p c. 3

16B. a. 2p b.3 c. 4 orbitals

17.

a. i. $CH \equiv CH + HCl \longrightarrow CH_2 = CHCl$

ii. $nCH_2 = CHCl \longrightarrow \left[ CH_2 - CHCl \right]_n$

b.i. Addition reaction ii. Polymerisation

18A. a. Alcohol and Ether
b. i. $CH_3 – CH_2 – CH_2 – CH_2 – OH$ ii. $CH_3 – CH_2 – O - CH_2 – CH_3$

c.i. $CH_3 - \underset{\underset{OH}{|}}{CH} - CH_2 - CH_3$ ii. $CH_3 - CH_2 - CH_2 - CH_2 - OH$

d. i. $CH_3 – O - CH_2 – CH_2 – CH_3$ ii. $CH_3 – CH_2 – O - CH_2 – CH_3$

18B. a. $C_nH_{2n-2}$
b. i. $CH \equiv C – CH_2 – CH_3$ ii. $CH_3 – C \equiv C – CH_3$
c. Position isomerism

d.i. $CH_3 - CH_2 - CH_2 - CH_3$ ii. $CH_3 - \underset{\underset{CH_3}{|}}{CH} - CH_3$