

Name: _____					
Subject: Chemistry		Class: 12 th	Time: 60 minutes	Total Marks:	30
Chapter No.7		MJDexpert.com			Obtained marks

Note: Please attempt any 7 short questions from Question 2. Also, attempt both parts (a and b) of Question 3. Cutting and removal of any content is strictly prohibited.

Objective-Section

Q. 1 Encircle the correct answer by filling the appropriate circle. (8x1=8)

- The chemist who synthesized urea from ammonium cyanate was**
 (A) Berzelius (B) Kolbe (C) Wohler (D) Lavoisier
- Linear shape is associated with which set of Hybrid orbital**
 (A) SP (B) SP² (C) SP³ (D) dSP²
- Which of the following is an amide?**
 (A) (NH₂)₂CO (B) NH₂CH₃ (C) C₆H₅NH₂ (D) N(CH₃)₃
- Which set of hybrid orbital has planar triangular shape**
 (A) Sp³ (B) Sp (C) Sp² (D) dSp²
- One of the following Molecule is sp² hybridized:**
 (A) CH₃-CH₃ (B) CH₂=CH₂ (C) CH=CH (D) CH₄
- The crude petroleum is separated in fractions by:**
 (a) Filtration (b) Fractional distillation (c) steam distillation (d) Fractions sublimation
- Carbon atom in dimethyl ether is**
 (a) Sp-hybridized (b) Sp² hybridized (c) Sp³-hybridized (d) None
- Number of isomers of C₄H₁₀ is**
 (a) 1 (b) 2 (c) 3 (d) 4

Subjective-Section

Q.2 Write short answers of any SEVEN of the following questions: (7x2=14)

- What are homocyclic and heterocyclic compounds, give one example of each
- What are fossil fuels? How are they formed?
- Define the term octane number. How octane number of gasoline is improved?
- What is Atomic Orbital Hybridization?
- What type of structural isomerism is shown by ethers?
- What is Tautomerism? Give an example.
- What is Cis-trans Isomerism? explain with the help of an example.
- Why is there no free rotation around a double bond?

Q.No.3 Long Question:

(4+4=8)

- Define the following with their uses (i) Thermal cracking (ii) Catalytic cracking (iii) Steam cracking
- What is meant by orbital hybridization? Give the structures of **ethane** and **ethyne**