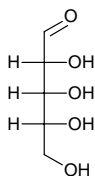
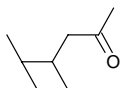


CHEMISTRY

- Sommerfeld's theory suggests _____ orbits for atomic structure.
(a) Spherical (b) circular (c) elliptical (d) dumb-bell
- In filling up of electrons in orbitals, electrons will pair up only when all the available orbitals have at least one electron each. This is called _____.
(a) Aufbau's principle (b) Pauli's exclusion principle (c) Hund's rule (d) Sommerfeld's theory
- Octet rule is deviated in _____.
(a) XeF₄ (b) PCl₄ (c) PCl₅ (d) OsO₄
- The imperfect crystallization with a few atoms missed in the crystal lattice is called _____.
(a) Schottky defect (b) Frenkel defect (c) Screw dislocation (d) Fresnel defect
- A sample of Strontium-90 is found to have decayed to one – eighth of its original amount after 87.3 years. What is the half life of Strontium-90?
(a) 40 years (b) 35.6 years (c) 29.1 years (d) 43.6 years
- The Arrhenius equation is _____.
(a) $k = A \cdot e^{RT/Q}$ (b) $k = A \cdot e^{RT/E_a}$ (c) $k = A \cdot e^{E_a/RT}$ (d) $k = A \cdot e^{-E_a/RT}$
- The possible number of stereoisomers for the following compound is ____.



- (a) 2 (b) 6 (c) 12 (d) 8
- The IUPAC name of the following compound is _____.



- (a) 4,5-Dimethylhexan-2-one (b) 1,2-Dimethylhexan-4-one (c) 4,5-Dimethylpentan-2-one (d) 1,2-Dimethylpentan-3-one
- One of the following compound forms a Schiff's base. Identify the compound.
(a) Alcohol (b) ether (c) aldehyde (d) ester
- In Rosenmund reduction, the catalyst used is _____.
(a) Pd/Ba(NO₃)₂ (b) Pd/CuSO₄ (c) Ni/Pt (d) Pd/BaSO₄
- The carbonyl group can be converted into a –CH₂– group by _____ reduction.
(a) Catalytic (b) Clemmenson (c) Wolf-Kishner (d) Rosenmund

12. Carbylamine reaction is associated with ____.
- (a) Urea (b) aniline (c) benzophenone (d) benzaldehyde
13. Aromatic nitrocompounds are ____.
- (a) Yellow in color (b) blue in color (c) pleasant in smell (d) highly volatile
14. Addition of Conc. Sulphuric acid to glucose leads to ____.
- (a) gluconic acid (b) glutaric acid (c) charring of glucose (d) explosion
15. All the amino acids in the human body are ____ .
- (a) D-amino acids (b) L-amino acids (c) DL-amino acids (d) deoxy amino acids