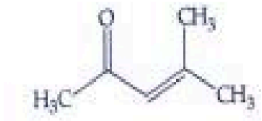
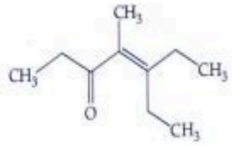
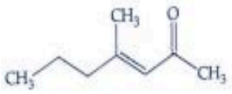
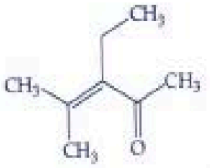
NEET Predicted Question Paper for Chemistry (3)

1. Which one of the following is not formed when acetone reacts with 2- pentanone in the presence of dilute NaOH followed by heating?

1) 

2) 

3) 

4) 

2. Choose the correct statement:

(1) Diamond is sp3 hybridised and graphite is sp2 hybridized.
(2) Both diamond and graphite are used as dry lubricants.
(3) Diamond and graphite have two dimensional network.
(4) Diamond is covalent and graphite is ionic.

3. The incorrect statement regarding enzymes is

(1) Enzymes are polysaccharides.
(2) Enzymes are very specific for a particular reaction and substrate.
(3) Enzymes are biocatalysts.
(4) Like chemical catalysts enzymes reduce the activation energy of bio processes.

4. Gadolinium has a low value of third ionisation enthalpy because of

(1) high electronegativity
(2) high basic character
(3) small size
(4) high exchange enthalpy

5. Which of the following statement is not correct about diborane?

(1) The four terminal Hydrogen atoms and the two Boron atoms lie in one plane.
(2) Both the Boron atoms are sp2 hybridised.

(3) There are two 3-centre-2-electron bonds.
(4) The four terminal B-H bonds are two centre two electron bonds.

6. The incorrect statement regarding chirality is

(1) Enantiomers are superimposable mirror images on each other
(2) A racemic mixture shows zero optical rotation
(3) SN1 reaction yields 1 : 1 mixture of both enantiomers
(4) The product obtained by SN2 reaction of haloalkane having chirality at the reactive site shows inversion of configuration

7. The pH of the solution containing 50 mL each of 0.10 M sodium acetate and 0.01 M acetic acid is [Given pKa of CH3COOH = 4.57]

(1) 4.57
(2) 2.57
(3) 5.57
(4) 3.57

8. In one molal solution that contains 0.5 mole of a solute, there is

(1) 100 mL of solvent
(2) 1000 g of solvent
(3) 500 mL of solvent
(4) 500 g of solvent

9. Amongst the following which one will have maximum 'lone pair - lone pair' electron repulsions?

(1) SF4
(2) XeF2
(3) CIF3
(4) IF5

10. Given below are two statements

Statement I: Primary aliphatic amines react with HNO2 to give unstable diazonium salts.
Statement II: Primary aromatic amines react with HNO2 to form diazonium salts which are stable even above 300 K.

In the light of the above statements, choose the most appropriate answer from the options given below

(1) Statement I is correct but Statement II is incorrect.

(2) Statement I is incorrect but Statement II is correct.
(3) Both Statement I and Statement II are correct.
(4) Both Statement I and Statement II are incorrect.

11. Which statement regarding polymers is not correct?

(1) Thermoplastic polymers are capable of repeatedly softening and hardening on heating and cooling respectively
(2) Thermosetting polymers are reusable
(3) Elastomers have polymer chains held together by weak intermolecular forces
(4) Fibers possess high tensile strength