M. Sc. II Sem. IV Mock

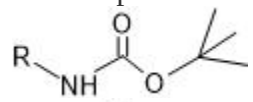
Synthetic Organic Chemistry II

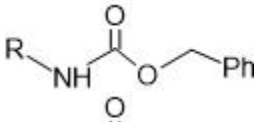
1) A suitable reagent combination for carrying out the following conversion is:

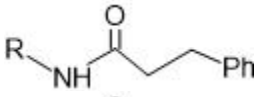
   a. Trimethyl orthoacetate and p- toluene sulphonic acid
   b. Trimethyl orthoacetate and Sodium hydroxide
   c. 2- methoxy propene and p- toluene sulphonic acid
   d. 2- methoxy propene and Sodium hydroxide

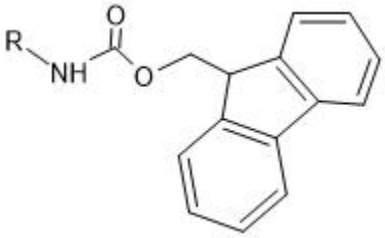
2) Among the following, the synthetic equivalent for acyl anion is:
   a. Ethyl magnesium bromide
   b. α- chloro acrylonitrile
   c. Acetylchloride and triethyl amine
   d. Nitroethane and base

3) Among the following, the compound that undergoes deprotection easily in treatment with hydrogen in the presence of 10% Pd/C to generate RNH_2 is:

   a. 

   b. 

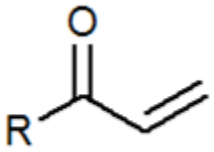
   c. 

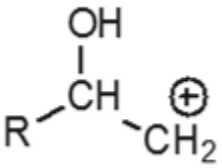
   d. 

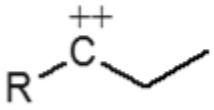
4) Which of the following acts as Umpolung reagent?
   a. Alcohol
   b. Methyl thiomethyl sulphoxide
   c. Alkyl halides
   d. Amines

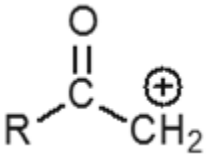
5) Conversion of one functional group into another functional group is known as:
   a. Oxidation
   b. Reduction
   c. Functional group removal
   d. Functional group interconversion

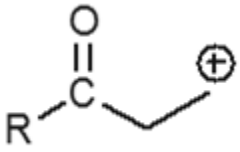
6) Which of the synthons represents the following reagent?



a. 

b. 

c. 

d. 

7)  is a good protecting group for protection of:

a. –OH group
b. –COOH group
c. –NH_2 group
d. Carbonyl group

8) Transform is represented as:

a. 
b. 
c.
d. 

9) In a cell to keep low ohmic resistance the minimum distance is:

a. 2-3 cm
b. 1-2 mm
c. 1-5 mm
d. 3-7 cm

10) Function of diaphragm in a cell is:
    a. keeping the electrode as close as possible
    b. avoid mixing of product and migration of current
    c. Mixing the solution
    d. Allow the product to settle
11) Electrode act as an electron sink.
    a. Anode
    b. Cathode
    c. working electrode
    d. counter electrode
12) Electrode can be fabricated from which kind of material:
    a. It should be highly reactive
    b. It should be inert
    c. It should have porous
    d. All of the above
13) By using Hg, Zn, Pb etc. cathodes aldehydes and ketones are readily reduced to corresponding:
    a. Alcohol
    b. Ester
    c. Ether
    d. alkyl halide
14) _____ obey 18 electron rule.
    a. $Fe(CO)_5$
    b. $Mn_2(CO)_{10}$
    c. $Fe(CO)_8$
    d. $V(CO)_6$
15) Addition along with oxidation is called:
    a. Addition reaction
    b. Elimination reaction
    c. Oxidative addition
    d. Reductive elimination
16) What is the most stable oxidation state of Samarium(Sm)?
    a. +2
    b. +4
    c. +3
    d. 0
17) CAN (Cerium Ammonium Nitrate) is _____.
    a. Reducing agent
    b. Oxidizing agent
    c. Regenerating agent
    d. Ligand
18) Find two electron donor group
    a. –Ph
    b. –CN
    c. CH_4

d. CO

19) The suitable reagent for following reaction is:
   a. H_2O_2/NaOH
   b. $Ni(CO)_4$
   c. CAN/Air
   d. $Pd(OAc)_2$

20) What is the reaction type of Alkenes Metathesis?
   a. Carbon-Hydrogen bond forming reaction
   b. Carbon-Halogen bond forming reaction
   c. Carbon-Oxygen bond forming reaction
   d. Carbon-Carbon bond forming reaction

ANSWER KEY

Question	Answer	Question	Answer
1	**b**	**11**	**a**
2	**d**	**12**	**b**
3	**b**	**13**	**a**
4	**b**	**14**	**b**
5	**d**	**15**	**c**
6	**d**	**16**	**c**
7	**b**	**17**	**b**
8	**b**	**18**	**d**
9	**b**	**19**	**c**
10	**b**	**20**	**d**