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Set	<b>P</b>
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**B.Pharmacy (Semester – II) (New CBCS) Examination, 2018**  
**PHARMACEUTICAL ORGANIC CHEMISTRY – I**

Day and Date : Monday, 10-12-2018  
Time : 2.30 p.m. to 5.30 p.m.

Max. Marks :75

1. Multiple Choice Questions :

20

- Victor meyers test is not given by
  - $(\text{CH}_3)_3 \text{COH}$
  - $\text{C}_2 \text{H}_5 \text{OH}$
  - $(\text{CH}_3)_2 \text{HCOH}$
  - $\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{OH}$
- In Diels – alder reaction the 1, 3 – butadiene is reacted with \_\_\_\_\_  
100°C to form Tetrahydro benzaldehyde.
  - Acroline
  - Aniline
  - Acytyline
  - Salicylate
- Propadiene  $\text{CH}_2 = \text{C} = \text{CH}_2$  is
  - Cumulated diene
  - Conjugated diene
  - Isolated diene
  - None of above
- Isobutyl group is which type of an alkyl group
  - Primary
  - Secondary
  - Tertiary
  - None
- According to anti Markovnikov's rule when propylene reacts with HBr in presence of peroxide product is
  - n – propyl bromide
  - Isopropyl bromide
  - Butyl bromide
  - Isobutyl bromide
- Which of the following compound would react most rapidly in an  $\text{SN}_2$  reaction ?
  - $\text{CH}_3 \text{CH}_2 \text{I}$
  - $\text{CH}_2 = \text{CHI}$
  - $(\text{CH}_3)_2 \text{CHI}$
  - $(\text{CH}_3)_3 \text{Cl}$
- 1, 2 dibromo ethane is formed by the reaction between
  - $\text{CH}_2 = \text{CH}_2$  and  $\text{Br}_2$
  - Acetylene with excess of HBr
  - Ethylene with excess of HBr
  - 1, 2 dichloro ethane with  $\text{Br}_2$

P.T.O.



- 8) What is the IUPAC name of given structure  $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_2 - \text{OH}$
- a) 2 – buten – 1 – 01                      b) 2 – buten – 4 – 01  
c) 2 – buten – 2 – 01                      d) 2 – butan – 4 – 01
- 9) Less basic amine of the following
- a)  $\text{CH}_3 - \text{Ar} - \text{NH}_2$                       b)  $\text{Ar} - \text{NH}_2$   
c)  $\text{NO}_2 - \text{Ar} - \text{NH}_2$                       d)  $\text{R} - \text{NH}_2$
- 10) Tollen's reagent can be used to distinguish
- a) Aldehydes and higher ketones      b) Aldehydes and lower ketones  
c) Aldehydes and Ketones              d) Neither
- 11) 2-bromo butane reacts with alcoholic KOH to give
- a) 1 – butene              b) 2 – butene              c) 1 – butenol              d) 2 – butane
- 12) Alcohols reacts with  $\text{PCl}_5$  to give
- a) Alkene              b) Alkyl halide              c) Acid              d) None of these
- 13) Cross cannizzaro's reaction is given by
- a)  $\text{C}_6\text{H}_5\text{CHO}$ ,  $\text{HCHO}$                       b)  $\text{C}_6\text{H}_5\text{CHO}$ ,  $\text{CH}_3\text{CHO}$   
c)  $\text{CH}_3\text{CHO}$ ,  $\text{HCHO}$                       d) All of above
- 14) Which of the following is strongest acid ?
- a) Water                      b) Formic Acid  
c) Acetic acid                      d) Propanoic acid
- 15) In Hofmann's method for separation of  $1^\circ$ ,  $2^\circ$  and  $3^\circ$  amines, the reagent used is
- a) acetyl chloride                      b) diethyl oxalate  
c) nitrous acid                      d) none of above
- 16) Which of the diazonium salt is most stable
- a) aryl diazonium salt                      b) alkyl diazonium salt  
c) cyclo alkyl diazonium salt              d) None of above
- 17) Primary alcohol is obtained by
- a) Hydration of alkene                      b) dehydration of alkenes  
c) Dehydrogenation of alkenes              d) None of above
- 18) Benzylamine reacts with nitrous acid to form
- a) Azo benzene                      b) Benzyl alcohol  
c) Benzene                      d) Phenol



- 19) Alkyl halides almost insoluble in water because
- They have low polarity
  - They are covalent compound
  - They do not form hydrogen bond with water
  - None of above
- 20)  $SN_1$  mechanism proceeds \_\_\_\_\_ intermediate state.
- Free radical
  - Carbonium ion
  - Pentavalent transition
  - Carbanion state

2. Answer **any seven** of the following :

(7×5=35)

- Write any five chemical reactions of aliphatic amines.
- Write methods of preparation of alcohols.
- Explain any five chemical reactions of alkenes.
- Write methods of preparation of 1, 3, – butadiene.
- Write chemical reactions of alkanes.
- Explain any four methods of preparation of carboxylic acids and explain effect of substituent on acidity.
- Write methods of preparations of aldehydes and ketones.
- Write a note on  $SN_1$  and  $SN_2$  reactions of Alkyl halides.
- Draw the structures from given IUPAC names or common names
  - 2 – oxo – 3 – methyl pentane
  - 2 – methyl – 2 – phenyl heptanol
  - 5 – hydroxy hexanoic acid
  - 2 – butanoic acid
  - Isobutyl alcohol.

3. Solve **any two** :

(10×2=20)

- Write mechanism, reaction, conditions and criteria along with applications of following :
  - Cannizzarro's reaction
  - Benzoin reaction.
- How will you separate a mixture primary, secondary and tertiary alcohols.
- Explain in detail  $E_1$  and  $E_2$  reaction.

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Set P