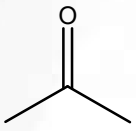
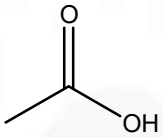
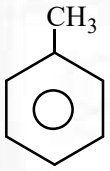
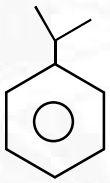
CHEMISTRY

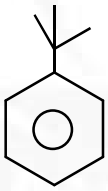
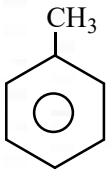
61. $CH_3-\overset{\overset{O}{\|}}{C}-OH \xrightarrow[\Delta]{NH_3} (A) \xrightarrow[KOH]{Br_2} (B)$ Product (B) is:

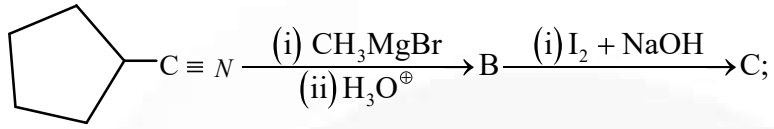
1) $CH_3-CH_2-NH_2$ 2) CH_3-NH_2

3)  4) 

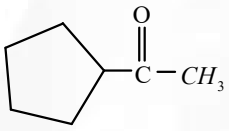
62. In which of the following reaction, Benzoic acid is not obtained as product

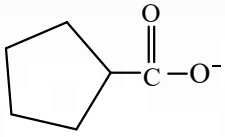
1)  $\xrightarrow[H_3O^+]{KMnO_4/OH^-}$ 2)  $\xrightarrow[H_3O^+]{KMnO_4/OH^-}$

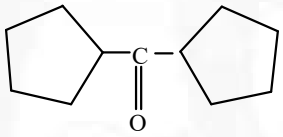
3)  $\xrightarrow[H_3O^+]{KMnO_4/OH^-}$ 4)  $\xrightarrow{K_2Cr_2O_7/H^+}$

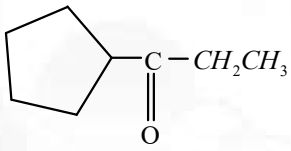
63. 

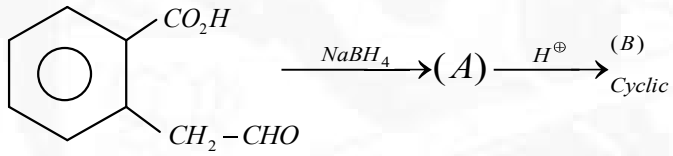
Product is:

1) 

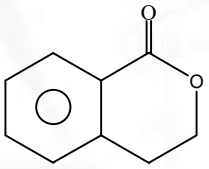
2) 

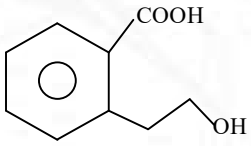
3) 

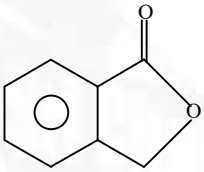
4) 

64. 

Compound (B) is:

1) 

2) 

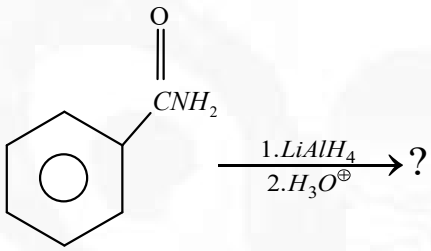
3) 

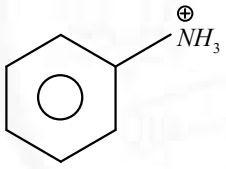
4) (1) and (3) both

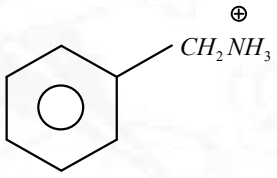
65. $Ph-CO-NH_2 \xrightarrow[\Delta]{P_2O_5} (A)$. Product (A) is:

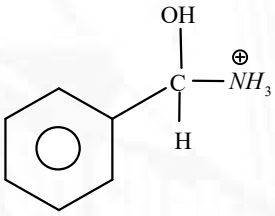
1) $Ph-NH_2$ 2) $Ph-CH_2-NH_2$ 3) $Ph-\underset{\displaystyle OH}{\underset{|}{CH}}-NH_2$ 4) $Ph-C\equiv N$

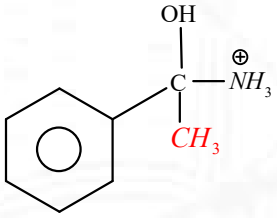
66. What is the major product of the following reaction ?



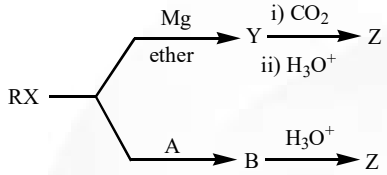
1) 

2) 

3) 

4) 

67.



Here 'A' may be_____

1) KCN 2) KNO_2 3) KNH_2 4) KNO_3

68. Which of the following cannot reduce ammonical silver nitrate ?

1) Glucose 2) Fructose 3) Maltose 4) Sucrose

69. Which of the following has maximum K_b value ?

1) $C_6H_5NH_2$ 2) CH_3NH_2 3) NH_3 4) $HCONH_2$

70. Which is a correct statement ?

1) Fructose is a ketose hence cannot reduce tollen's reagent

2) Fructose can reduce tollen's reagent because it is an aldose

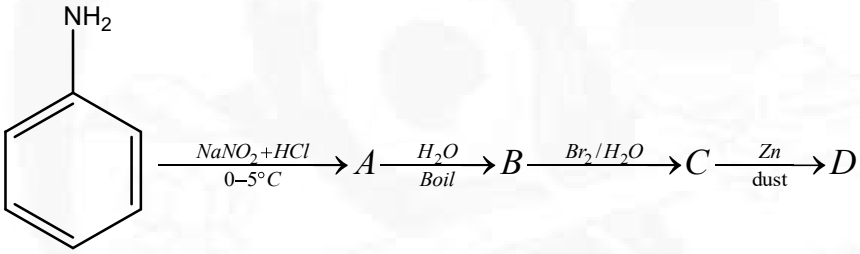
3) Fructose reduces tollen's reagent through dynamic isomerisation into glucose

4) Fructose is dextrorotatory

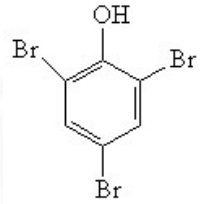
71. An amino acid with a thioether group
1) Cysteine 2) Serine 3) Threonine 4) Methionine

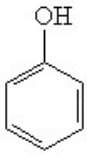
72. Correct statement about protein denaturation
1) Its primary structure is not upset
2) Configurations of the native protein are not changed during denaturation
3) Hydrogen bonds are not disturbed during denaturation
4) Physical changes do not upset the secondary and tertiary structure of a protein

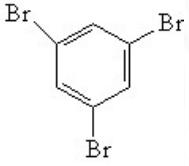
73.

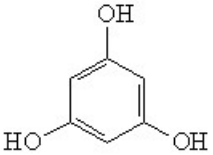


Compound 'D' is

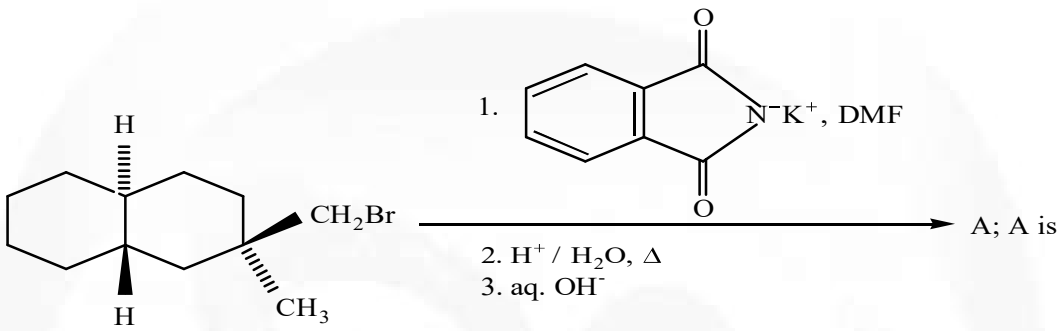
1) 

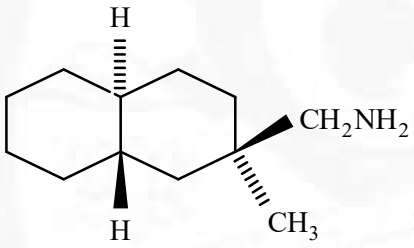
2) 

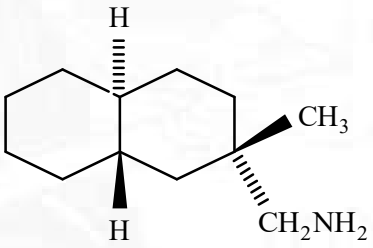
3) 

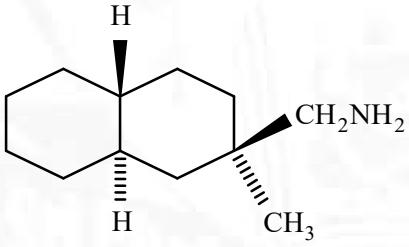
4) 

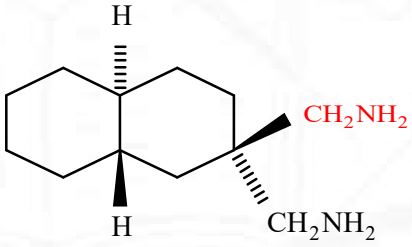
74.



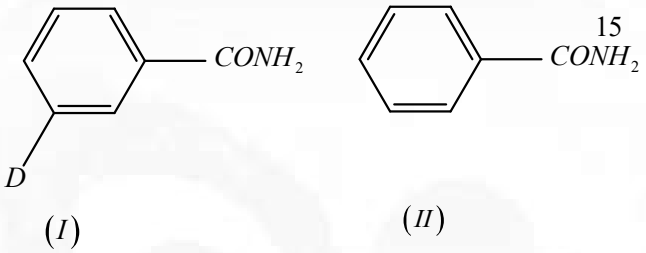
1) 

2) 

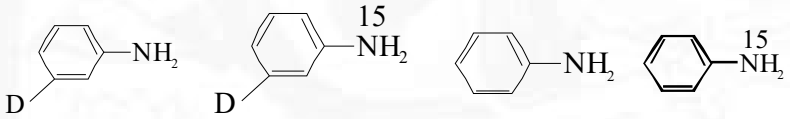
3) 

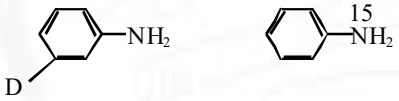
4) 

75. What are the constitutent amines formed when the mixture (I and II, undergoes. Hoffmann bromamide degradation.



(I) (II)

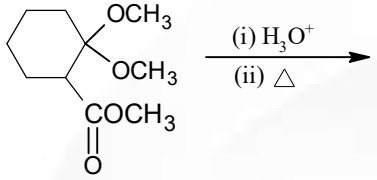
1) 

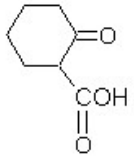
2) 

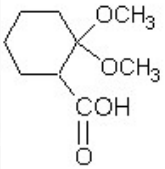
3) 

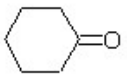
4) 

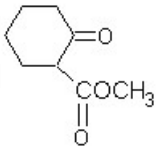
76. The end product of the following reaction would be



1) 

2) 

3) 

4) 

77. $CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-COOH \xrightarrow{SOCl_2} A \xrightarrow[CH_2N_2]{} B \xrightarrow{Ag_2O/H_2O} C$. The compound 'C is

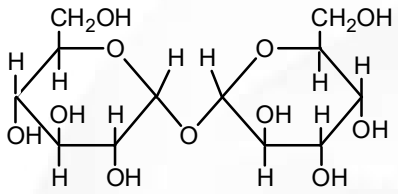
1) $CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-COOCH_3$

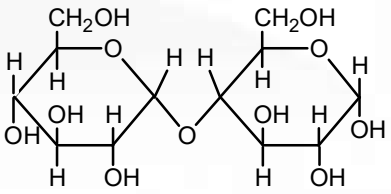
2) $CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-CO-CH_3$

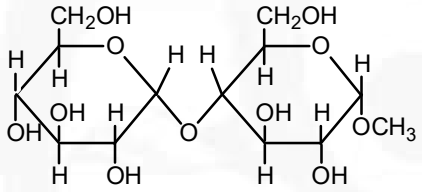
3) $CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-CH_2OH$

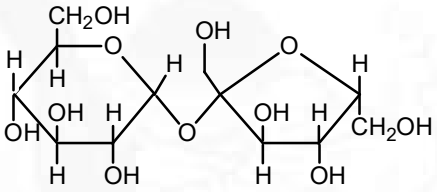
4) $CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-CH_2COOH$

78. Which of these compounds, I, II, III, IV, is a reducing disaccharide?


I


II


III


IV

1) I alone 2) II alone 3) III alone 4) IV alone

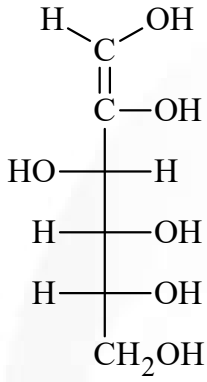
79. In the given reaction:

Glucose + $3C_6H_5NH-NH_2 \xrightarrow{H^+/\Delta}$ Osazone + A + B

(A) and (B) are

1) $C_6H_5NH_2$ and NH_3 2) $C_6H_5NH_2$ and NH_2OH

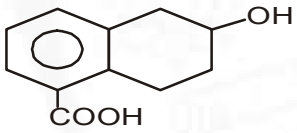
3) $C_6H_5NH-NHOH$ and NH_3 4) NH_2OH and HOH

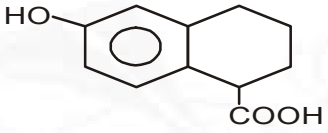
80. 

The Fischer projection formula shown above is the enolic form of

1) D-fructose 2) D-mannose 3) D-glucose 4) All

81. The following two compounds I and II can be distinguished by using reagent





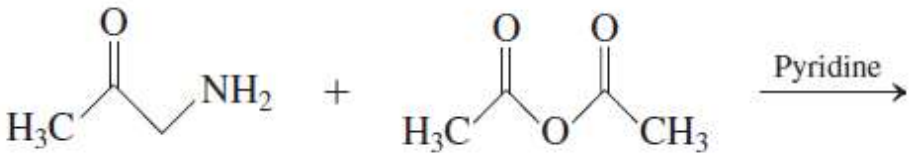
1) aq. $NaHCO_3$ 2) Neutral $FeCl_3(aq)$

3) Blue litmus solution 4) Na metal

(5) HCl ($ZnCl_2$ anhydrous)

1) 1 or 3 2) 2 or 5 3) 4 or 5 4) 3 or 4

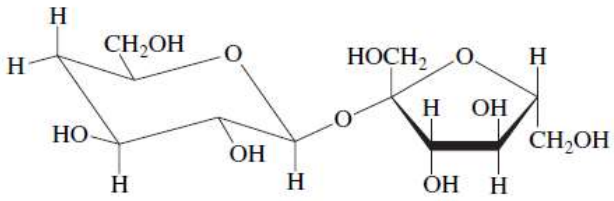
82. Which of the following functional groups are present in the product



1) Two ketones and an amide 2) A ketone and an amide
3) A ketone and an ester 4) An ester and an amide

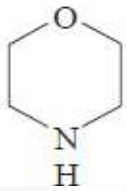
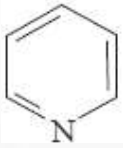
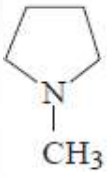
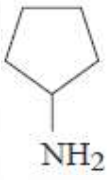
83. A positive carbylamine test is given by:
1) N, N – Dimethyl anline 2) N – Methyl – o – Methyl aniline
3) p – Methyl benzylamine 4) All of these

84. One of the statements below is correct about the sugar shown. Which one?



1) It is a nonreducing sugar 2) It forms an osazone
3) It exists in two anomeric forms 4) It undergoes mutarotation

85. One of the following is often used to prepare enamines from aldehydes and ketones. The others do not yield enamines. Identify the enamine-forming compound

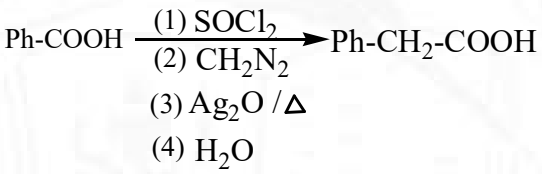
1)  2)  3)  4) 

86. Which one of the following compounds does not give positive test for nitrogen in the Lassaigne's test?

1) Urea 2) Hydroxyl amine

3) Glycine 4) Diethylamine

87. One of the intermediate stages in the following synthesis, involved

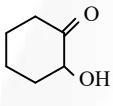
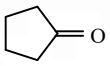


1) Iso-cyanate formation 2) ketene formation

3) Betaine formation 4) open carbocation formation

88. Diethyl adipate

1) $HOCH_2-(CH_2)_4-CH_2OH$ 2) $HOCH_2-(CH_2)_3-CH_2OH$

3)  4) 

89. For the detection of sulphur in an organic compound, sodium nitroprusside is added to the sodium extract of the compound. If sulphur is present, an intense pink to purple colour is obtained due to the formation of

1) $Fe(CN)_2$ 2) $K_3[Fe(CN)_5NS]$

3) $Na_4[Fe(CN)_5NOS]$ 4) $Na_4[Fe(CN)_5]$

90. Aniline can be separated from phenol using

1) $NaHCO_3$ 2) dilute HCl 3) NaCl 4) conc. HNO_3