CHEMISTRY

61. The main product of the following reaction sequence is

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{2}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{2}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{2}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{3}$$

$$CH_{4}$$

$$CH_{4}$$

$$CH_{5}$$

$$CH_{7}$$

$$C$$

- 62. $2CH \equiv CH \xrightarrow{Ammoniacal. CuCl} CH \equiv C CH = CH_2 \xrightarrow{HCl} Cu_2Cl_2/NH_4Cl \rightarrow CH_2 = C CH = CH_2 \xrightarrow{Polymerisation} Polymer A, polymer 'A' is$
 - 1) PVC
- 2) neoprene
- 3) chloroprene
- 4) Gutta-percha

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63. Find the product of the reaction,

$$\begin{array}{c|c} & & \\ \hline \\ \hline \\ \Delta \end{array}$$

64.

OH OH COOH
$$+ CO_{2} \xrightarrow{1) \text{ NaOH}} \xrightarrow{\text{COOH}}$$

$$3) \text{ H}^{+}$$

Name of the above reaction is

1) Kolbe's reaction

- 2) Elb's reaction
- 3) Reimer Tiemann's reaction
- 4) Duff's reaction.

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65.

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$$CH_3 - CH = CH - CH_3$$

$$CH_3 \longrightarrow B 'B' is$$

$$CH_3 \longrightarrow B 'B' is$$

3) Both 1 and 2

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OH OH PCl₅ The product is

1)

66.

2)

3)

4)

Ph \longrightarrow Me $\xrightarrow{\text{H}_2\text{SO}_4}$ A + B; A and B are

1)

67.

) Me and CH

2)

OH COMe

3) Me and MeOH

4)

He He Me Me

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68. Cummene (iso-Propylbenzene) on oxidation with alkaline $KMnO_4$ gives

1) Phenol

2) Acetone

3) Both (1) & (2)

4) Benzoic acid

69. $Phenol \xrightarrow{Zn} X \xrightarrow{C_2H_5Cl} Y$; number of structural isomers of Y are

- 1) 2
- 2)3
- 3)4
- 4) 0

70.

1) HO—(O)—OH

2) 0= =0

3) HO OF

4) O= OH

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71. Which of the following ether can be prepared by using Williamson's synthesis

2)
$$H_2C = CH - O - CH = CH_2$$

4)
$$CH_2 = CH - CH_2 - O - CH_2 - CH = CH_2$$

72. The product P (major) of the following reaction is $(0-5^{\circ} \text{ C})$

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73. How many moles of HCOOH is formed, due to the oxidation with HIO₄ of,

1) 1

2) 2

3)3

4) 4

- 74. Teflon is
 - 1) a linear chain polymer
- 2) a cross-linked polymer
- 3) a condensation polymer
- 4) a co-polymer
- 75. Which is an example of thermosetting polymer?
 - 1) Polythene

2) PVC

3) Neoprene

- 4) Bakelite
- 76. The catalyst used in the manufacture of polyethylene by Ziegler method is
 - 1) Titanium tetrachloride and triphenyl aluminium
 - 2) Titanium tetrachloride and triethylaluminium
 - 3) Titanium dioxide
 - 4) Titanium isopropoxide

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- 77. Polymer which has amide linkage is
 - 1) Nylon 66

2) Terylene

3) Teflon

- 4) Bakelite
- 78. Which of the following is <u>not</u> a natural polymer?
 - 1) starch

2) protein

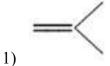
3) cellulose

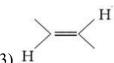
4) nylon

79

$$\begin{array}{c|c} CH_3 & CH_3 \\ \hline - CH_2 - C - CH_2 - C - \\ \hline - CH_3 & CH_3 \end{array}$$

is a polymer having monomer units of





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- 80. Which of the following is chain growth polymer?
 - 1) Polypropylene

2) Bakelite

3) Nylon – 6,6

- 4) Nylon 6
- 81. Buna S is obtained when 1,3 butadiene adds to :
 - 1) Acrolein

2) Neoprene

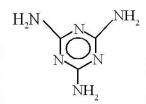
3) Vinylbenzene

- 4) Chloroprene.
- 82. Melamine plastic crockery is made of polymer material, the raw materials of which are :



1) CH₃CHO and CH₃NH₂

2) HCHO and



3) HCHO and



4) HCHO and

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83. $CH_2 = CH_2 \xrightarrow{O_2/Ag} \mathbf{A} \xrightarrow{H^+/H_2O} \mathbf{B}$

Using compound B, a group of the following polymers can be synthesized:

1) Terylene, glyptal

2) Nylon-66, dacron

3) Dacron, nylon-6

- 4) Thiokol, Buna S.
- 84. In which of the following polymers ethylene glycol is one of the monomer units?

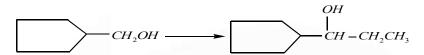
$$(CH_2-CH_2)$$

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85.



The reagents used for the above conversion

- 1) Cu/Δ , CH_3CH_2MgCl/H_3O^+
- 2) CrO_3 , C_2H_5MgCl/H_3O^+
- 3) $KMnO_4$, C_2H_5MgCl/H_3O^+
- 4) $Na_2Cr_2O_7/H^+, C_2H_5MgCl/H_3O^+$
- 86. One of the following alcohols undergo dehydration easily

87. One of the following reaction yields secondary alcohol

1)
$$RLi + CH_3 - C - Cl \xrightarrow{H_2O/H^+}$$

2)
$$RLi + HCOOC_2H_5 \xrightarrow{H_2O/H^+}$$

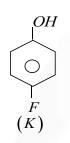
4)
$$RLi + H_2C - CH_2 \xrightarrow{H_2O/H^+}$$

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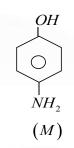
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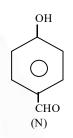
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88. The correct order of acidic strength



$$OH$$
 CN
 (L)



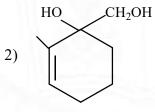


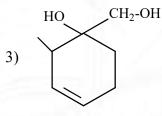
- 1) N>L>K>M
- 2) L>N>K>M
- 3) L>K>N>M
- 4) N>K>L>M

89.

$$\begin{array}{c}
O \\
O \\
O \\
O \\
\hline
- LiAlH_4 \\
\hline
- H_2O
\end{array}$$

$$(A)$$





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90. Phenol is not the product in one of the following reaction

