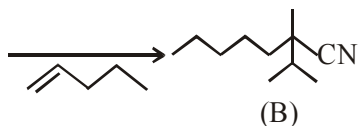
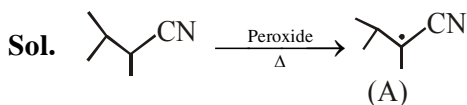


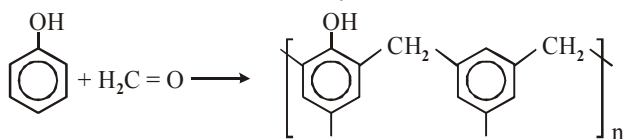
SOLUTION

1. NTA Ans. (1)



2. NTA Ans. (3)

Sol. Bakelite formation is example of electrophilic substitution and dehydration.



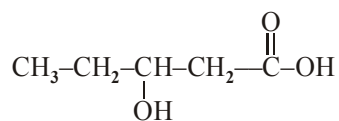
3. NTA Ans. (4)

Sol. PHBV :

Poly β -hydroxy butyrate-co- β -hydroxy valerate

(3-hydroxy butanoic acid)

+

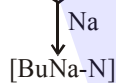


(3-hydroxy pentanoic acid)

4. Official Ans. by NTA (1)

Sol. $[\text{BuNa-N}]$ is an addition polymer

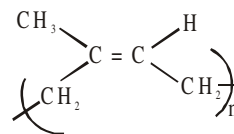
Buta-1, 3-diene + Acrylonitrile



5. Official Ans. by NTA (2)

Sol.(a) $n\text{CH}_2=\underset{\text{CH}_3}{\text{C}}-\text{CH}=\text{CH}_2 \longrightarrow$ Poly cis-isoprene
(Natural rubber)

isoprene



(b) $n\text{CH}_2=\underset{\text{Cl}}{\text{C}}-\text{CH}=\text{CH}_2 \longrightarrow$ $\left(\text{CH}_2-\underset{\text{Cl}}{\text{C}}=\text{CH}-\text{CH}_2 \right)_n$

Chloroprene

Neoprene

(c) $n\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2 + n\text{CH}_2=\underset{\text{CN}}{\text{C}}-\text{CH} \longrightarrow$ $\left[-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\underset{\text{CN}}{\text{CH}}- \right]_n$
1,3 buta diene Acrylonitrile Buna-N

(d) $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2 + \text{CH}_2=\underset{\text{C}_6\text{H}_5}{\text{C}}-\text{CH} \longrightarrow$ $\left[\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\underset{\text{C}_6\text{H}_5}{\text{CH}}- \right]_n$
1,3-buta diene styrene Buna-S

6. Official Ans. by NTA (3)