



9.	Write IUPAC names for the following compounds. a) $(\text{CH}_3)_3\text{C}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CHO}$ b) $\text{HO}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{COOH}$ c) $\text{CH}_3-\text{CO}-\text{CH}_2-\text{CHO}$ d) $(\text{CH}_3)_3\text{C}-\text{CH}(\text{C}_2\text{H}_5)-\text{CH}_3$ e) $\text{CH}_2=\text{CH}-\text{CH}_2-\text{CH}=\text{CH}_2$ f) $\text{HOOC}-\text{CH}(\text{CH}_3)-\text{CH}(\text{CH}_3)-\text{CH}_2-\text{CH}_3$ g) $\text{CH}_3-\text{CH}_2-\text{CH}(\text{CH}_3)-\text{CH}_2-\text{NO}_2$ h) $\text{HO}-\text{CH}(\text{CH}_3)-\text{CH}_2-\text{CHO}$ i) $\text{H}_2\text{N}-\text{CH}=\text{CH}-\text{COOH}$ j) $\text{CH}_3-\text{CO}-\text{CH}(\text{CH}_3)-\text{C}_2\text{H}_5$ k) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{COOC}_2\text{H}_5$ l) $\text{CH}_3-\text{CO}-\text{CH}_2-\text{CH}_2-\text{COOH}$ m) $\text{Ph}-\text{CH}=\text{CH}-\text{CH}_2-\text{COOH}$	1 each
10.	Arrange the following ions in the increasing order of stability. a) $\text{CH}_3-\text{CH}_2^+$ , $\text{CH}_3^+$ , $(\text{CH}_3)_3\text{C}^+$ , $(\text{CH}_3)_2\text{CH}^+$ b) $\text{CH}_3-\text{CH}_2^-$ , $\text{CH}_3^-$ , $(\text{CH}_3)_3\text{C}^-$ , $(\text{CH}_3)_2\text{CH}^-$	2
11.	Write the resonating structures of a) Nitrobenzene    b) Aniline    c) Chlorobenzene    d) Phenol    e) Benzaldehyde	1 each
12.	Draw the resonance structures of propenal and indicate their relative stabilities.	2
13.	Explain why: a) Nitric acid is added to sodium fusion extract before adding $\text{AgNO}_3$ solution for testing halogens. b) $(\text{CH}_3)_3\text{C}^+$ is more stable than $\text{CH}_3\text{CH}_2^+$	1 each
14.	Discuss the chemistry of detection of the following elements in an organic compound. a) Carbon and hydrogen    b) Nitrogen    c) Chlorine, bromine and iodine    d) Sulphur e) Phosphorous	1 each
15.	Explain the principle of: a) Crystallisation    b) Sublimation    c) Differential extraction    d) Distillation e) Steam distillation    f) Distillation under reduced pressure    g) Chromatography	1 each
16.	Define isomerism. Draw the structural isomers of $\text{C}_5\text{H}_{12}$ .	2
17.	Draw the chain isomers of $\text{C}_4\text{H}_9\text{OH}$ and the functional group isomers of $\text{C}_2\text{H}_6\text{O}$ .	2 each
18.	Explain the following with example a) Functional isomerism    b) Metamerism    c) Position isomerism    d) Chain isomerism	1 each
19.	Suggest suitable method and mention the principle involved to purify a) Glycerol from spent lye.    b) Mixture containing Aniline and water	1 each