

## INTRODUCTION

*Carboxylic acids are the organic compound which contain one or more carboxyl (-COOH) group. The carboxylic acids may be aliphatic if the carboxyl group is attached to the alkyl group and aromatic in case, it is linked to aryl group. Aliphatic carboxylic acids containing more than twelve carbon atoms are generally obtained from the fats. These are, therefore known as fatty acids. In addition to the carboxylic acids, a large number of other compounds, called acid derivatives are also known which are represented by the general formula (RCOX) where RCO is called acyl group and X is the substituent that has replaced the -OH part of the carboxyl group. The different acid derivatives are acid chlorides (X = Cl), acid amides (X = NH<sub>2</sub>) esters (X = OR) and acid anhydride (X = OCOR).*

# CONTENTS

JEE Syllabus	... 1
Introduction	... 1
Nomenclature	... 1
Physical Properties	... 3
Acidity of Carboxylic Acids	... 4
General Methods of Preparations	... 5
General Reactions of the Fatty Acids	... 8
Esters	... 14
Acid Chlorides	... 16
Amides	... 18
Solution to Exercise	... 25
Chapter at a Glance	... 27
Solved Problems	... 29
Assignment Problems	... 50
Answers to Assignment Problems	... 76