

Preface

With great pleasure, this book on aircraft armaments is delivered. It is written for all those who are either interested in studying the subject as beginner or working in the armed forces and interested to use it as reference. The book is a compilation of lectures delivered by me to the armed forces officers stationed at *Defence Institute of Advanced Technology*, Pune and the post-induction trainee engineers of *Hindustan Aeronautics Limited*. Dr. Prashanth Reddy Hanmaiahgari joins Dr. Mrinal Kaushik as co-author in this edition.

The book begins with introducing elementary concepts about various armaments launched by the combat aircrafts in Chap. 1. At the end some references are also provided so that interested readers may get more details about these ‘air-dropped-ammunitions.’

In Chap. 2, the fixed and flexible guns mounted on aircraft are discussed. To intercept combat aircrafts, a brief review on anti-aircraft guns is also presented.

The detailed chronological development of bombs is discussed at a length in Chap. 3. It begins with the discussion on the ‘*general-purpose bombs*’ and subsequently provides a detailed treatment on ‘*atomic*’ and ‘*thermo-nuclear*’ bombs.

In Chap. 4, a detailed and consolidated account of cutting-edge technology of missiles is presented. Broad classification of missiles depending upon their *Type*, *Launch Mode*, *Range*, *Propulsion System*, *Warhead Used*, and *Guidance System* are written in such a manner that even an average student can grasp them without facing any difficulty. Subsequently the state-of-art treatment on ‘*ballistic missiles*’ is also attempted. The chapter ends with highlighting problems associated in missile launch.

The brief discussion on armament materials is given in Chap. 5.

The organization of United Nations (UN) is briefly discussed in Chap. 6. Prevention of nuclear, biological, and chemical weapons through various treaties and conventions as adopted by the UN General Assembly are highlighted at the end.

A large number of multiple choice questions with their answers are given in *Appendix* for the readers to evaluate their understanding.

I am confident that the readers will find the manuscript useful and will be able to grasp the fundamentals easily.

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