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## **ITI COPA Theory**



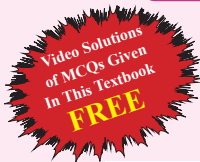
**NSQF Level-3 Textbook**

by Sumeet Sharma

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## Preface

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The Trade Committee members of COPA trade (sector: IT & ITeS) have revised & redesigned the syllabi w.e.f. commencement of admission session of 2022, by introducing new modules and much more advanced software, in order to provide a comprehensive foundation and appreciation in prevailing trends in information technology.

New 2022 syllabus also provides opportunity for students to select from Elective Modules on JAVA and PYTHON programming. Students can select either of the two Elective Modules for their training. Working towards the same goal, the prescribed curriculum comprises of **Introduction to Computer Fundamentals, Operating Systems, Office Automation using Word, Excel, PowerPoint, Database Management Systems, Networking, Internet and Web Design Concepts, JavaScript, E-commerce, Cyber Security, Cloud Computing & Application Development Life Cycle and Python & JAVA Programming Languages.**

As per the syllabus, this book has been segregated into following modules:

- ✧ **Introduction to Computers Fundamentals:** This subject is explained thoroughly in Modules 1 to 2. It focuses on Computer Fundamentals, Hardware and Software concepts.
- ✧ **Introduction to Operating Systems:** This subject is explained thoroughly in Modules 3 to 5. It focuses on Operating System Concepts (DOS/Windows 10/LINUX).
- ✧ **Office Automation Packages:** This subject is explained thoroughly in Modules 6 to 8 and 12. It focuses on working and features provided by MS-Word, MS-Excel and MS-PowerPoint.
- ✧ **Database Management Systems:** This subject is explained thoroughly in Module 10. It focuses mainly on concepts of Database Management Packages.
- ✧ **Networking, Internet and Web Design & JavaScript:** This subject is explained thoroughly in Modules 10 to 11. It focuses on Networking, Communication, Internet and Web Designing and implementing simple HTML JavaScripts.
- ✧ **E-commerce and Cyber Security:** This subject is explained thoroughly in Modules 13 to 14. It focuses on activities involved in E-commerce, Security Issues, Vulnerability and Risk Management and IT Act.
- ✧ **Cloud Computing and Application Development Life Cycle:** This subject is explained thoroughly in Module 15. It focuses on benefits and resources of Cloud Computing and different phases of Application Development Life Cycle.
- ✧ **Programming Language (PYTHON):** This subject is explained thoroughly in **Elective Module I.** It focuses on features, Syntax, Variables, Data types, Operators, Conditional and Loop Statements, Strings, Lists, Tuples, Dictionaries, Arrays, Modules Input / Output routines in Python.
- ✧ **Programming Language (JAVA):** This subject is explained thoroughly in **Elective Module II.** It focuses on OOPS, JVM, Bytes Codes, Class path, Syntax, Identifiers, Variables, Data types, Operators, Conditional and Loop Statements, Strings, Input / Output Streams, Objects & Classes in JAVA.

**A detailed description and a series of new multiple choice assignments with solutions and lab practical exercises of above topics has been instituted and designed in this book,** with an aim to make the students understand various features of the software and their conceptual aspects efficiently by practice.

Since there is always a room for improvement even for a well written book, we always welcome any suggestions or ideas for perfection of this book. It is trusted that this book will be beneficial not only for students, but also for office people and professionals alike.

I sincerely thank the Publishers Mr. Anil Mehta and Mr. Satinder Mehta for their active co-operation in making up of this book. The present book is a further step towards their services to the education community.

-Author

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