How to Get Free Video Solutions with this Text-book:

1. Go to https://asianonline.in/user-signup or Scan the QR Code given below.
2. On the User Signup page of the website, fill your details – Name, Whatsapp Mobile Number, Email-id and the Promocode given on this card after scratching.
3. Click on "Signup Now."
4. You will get an OTP on your mobile phone on Whatsapp.
5. Enter the received OTP under "6 Digit OTP", and click on "Verify OTP".
6. Your Sign up process is complete, now you can click on "Show Lectures" to see chapter wise Video Solutions of MCQs given in this book.

Terms and Conditions:

1. The Promocode can be used only one time for one user.
2. To see the Video Solutions again, the same user can go to their Login Account by logging in at https://asianonline.in/user-login with only their Whatsapp Mobile Number (which was used during the Signup process).

SCAN QR CODE TO USE PROMOCODE

Call us at 9716836719

Asian

AP Asian publishers

ITI Industrial Training Institute

ITI COPA Theory

NSQF Level-3 Textbook

by Sumeet Sharma

MCQs (Complete Syllabus) Video Solutions

Video Solutions of MCQs Given In This Textbook **FREE**

You will get:

- FREE Video Solutions of 800+ MCQs (with explanation) given in this book
- 20+ hours of Video
- Doubt Resolution by the Instructor

USE THIS PROMOCODE TO GET FREE VIDEO SOLUTIONS OF MCQs IN THIS BOOK.

Visit us at www.asianonline.in or contact us at 9716836719

According to NSQF Level 3 compliant Competency-based Curriculum prescribed by D.G.T., Ministry of Skill Development and Entrepreneurship, Govt. of India

As per NIMI – DGT Modular pattern

Preface

The Trade Committe 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 excercises 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

Contents

NSQF (Level-3) Compliant Competency based Curriculum for COPA Trade Theory (2022 Syllabus) vi-viii

Module 0. Safe Working Practices ..... I-III

Module 1. Introduction to Computer Fundamentals 1-15

History of Computing ; Generations of Computers ; What is Computer?; Characteristics of Computers ; Applications of Computers ; Classification of Computers ; Programming Languages ; CPU Architecture ; Microprocessors

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **13-15**

Module 2. Hardware and Software Concepts 16-30

Input Devices ; Output Devices ; Secondary Storage Devices ; Flash Memory ; Connectivity Ports ; Computer Software

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **28-30**

Module 3. Introduction to Operating System 31-42

Operating System; User Interface; DOS; GUI; Booting; System Files; Startup Files; Virus Scanners

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **41-42**

Module 4. Windows 10 Operating System 43-58

Windows 10 Desktop Icons; Start Menu; Task bar; Working with Windows; Dialog boxes; This PC; File Explorer; Creating, Copying, Moving and Opening Files & Folders; Shutdown and Restarting Windows; Printing in Windows

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **56-58**

PRACTICAL TYPE QUESTIONS **58**

Module 5. LINUX Operating System 59-73

What is LINUX?; Components of Desktop; Basic Desktop Customization; File Manager; Files and Folders in LINUX; Text Editor; The Shell

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **71-73**

PRACTICAL TYPE QUESTIONS **73**

Module 6. Word Processing : MS-Word 74-91

Features of a Word Processor; Word Processing Concepts; Getting started with MS-Word; MS-Word Components; Creating, Saving, Printing, Closing, Opening, Printing, Protecting the document; Working, Editing and Formatting Text (Selecting, Copying, Moving and Deleting text, Find & Replace, Undo/Redo, Format Font command, Borders & Shading, Bullets & Numbering); Paragraph Formatting (Line spacing, Indentation, Tab, Spelling & Grammer Check); Page Setup (Headers & Footers, Page breaks); Inserting Pictures & Shapes; Macros; Mail Merging of Letters

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **88-91**

PRACTICAL TYPE QUESTIONS **90-91**

Module 7. Electronic Spreadsheets : MS-Excel 92-114

Features of Spreadsheets ; Components of Excel Window; Excel Workbooks; Worksheets; Excel Ranges; Entering Data (Entering Text, Number, Date & Formula in cell); Editing Data (Edit, copy, move contents of a cell, range, column, row, worksheet); Formulas (Structure, Cell referencing, Functions); Linking of Worksheets; Functions; Page Setup; Sorting & Filtering Data; Data Validation; Creating Charts; Pivot Tables; What-if-Analysis; Goal Seek Scenarios

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **110-114**

PRACTICAL TYPE QUESTIONS **112-113**

Module 8. Electronic Presentations : MS-PowerPoint 115-128

Features of Presentation; Starting PowerPoint 2010; Creating, Opening & Saving a Presentation; Components of a PowerPoint Window; Slide; Different Views; Adding & Formatting Text, Picture & Numbered Lists to Slides; Design Templates & Themes; Backgrounds; Slide Transitions; Animating Objects; Printing a Presentation; Tips for Effective PowerPoint Presentation; OpenOffice.org

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **126-128**

PRACTICAL TYPE QUESTIONS **128**

Module 9. Concepts of Database Management Systems 129-153

Relational Database: Relation, Attribute, Tuple, Domain, Cardinality, Degree, Primary Key, Candidate Key, Alternate Key, Foreign Key; Data Models; Concept of DBA & Database User; Database Schema; SQL : Data Retrieval, Data Manipulation, Data Definition, Data Control Commands; Designing Database; Normalization; Data Types; Data Integrity; Enforcing Primary Key and Foreign key; Indices; Transactions; ACID Property of Transaction Constraints; Select Queries with different clauses; Joining of Tables; Sub Queries; Funcations: Aggregate and Scaler Functions

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) **151-153**

PRACTICAL TYPE QUESTIONS **152-153**

Module 10. **Networking, Internet and Web Designing 154-192**

Need for Networking ; Types of Networking; LAN Topologies; Communication Channels; Wireless Network; Internet Service Provider; Protocols; OSI 7 Layer; Logical and Physical Address; Network Security; Proxy Server; World Wide Web; Internet; Web Browsers; Chat Service; Video Conferencing; Searching on Net; Domain Name; Electronic Mail; Social Networking; Cloud Storage; Static and Dynamic Website; Hypertext Markup Language; DHTML; Concept of Web Pages; Forms; Cascading Style Sheets; Web Server & Hosting

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) 190-192

PRACTICAL TYPE QUESTIONS 192

Module 11. **Introduction to JAVAScript 193-223**

Software and Design Logic; Web Servers ; Scripting Languages ; JAVAScript Languages Features ; Data Types ; Variables ; Conditional & Looping Statements ; Functions ; Objects ; Array Objects ; Events & Timing ; Cookies ; Form Validation ; Browser Environment ; Using Animation and Multimedia Files in JAVASCRIPT

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) 221-223

Module 12. **Advanced Excel Concepts 224-245**

Revision of Features & Components of Spreadsheets, Workbooks; Excel Worksheets: Selecting Cells, Rows/ Columns, Insert/Delete a row/column, Hide/Unhide a row/column; Excel Protection; Formatting: Fonts, Size, Color, Alignment; Conditional formatting; Page Setup & Printing a worksheet; Referencing, Cell naming; Excel Linkage Custom Formats; Macros, Pivot tables, Pivot charts; Advanced Graphs & Power Queries

MULTIPLE CHOICE QUESTIONS (With Keys) 244-245

Module 13. **Electronic Commerce 246-262**

E-Commerce; Technology, Application, Feasibility & Advantages; Types: On Premise, SaaS, Open Source; Sales Scenarios, Types of Data Exchange; How to Start Business Online?; Online MarketPlace; Online Catalogues, Categories, Products, Shopping Cart Software, Checkout Pages, Electronic Billing & Payments; E-Commerce Payment System; Net Banking, Paypal, Google Wallet; Payment Cards: Charge, Debit, Credit, ATM, Store-Value, Fleet; Payment Service Provider and Payment Gateway

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) 259-262

Module 14. **Cyber Security and IT-Act 2000 (With Amendments) 263-278**

Internet Security; Firewall; SSL; Proxy Server; Intellectual Property; Copyright Issues; Information Security Vulnerability; Information Security Management System; Vulnerability Consequences; Risk Management; Information Technology Act 2000; Information Technology Act 2008 (Amendments); Information Technology Act 2021; Cyber Crime & Criminals

MULTIPLE CHOICE QUESTIONS (With Keys) 278-278

Module 15. **Cloud Computing & Application Development Life Cycle 279-296**

E-Commerce: Technology, Application, Feasibility & Advantages; Types of E-Commerce : On Premise, SaaS, Open Source; E-Commerce Sales Scenarios, Data Exchange;How to Start Business Online?; Online MarketPlace: Online Catalogues, Categories, Products, Shopping Cart, Checkout Pages, E-Billing & Payments; E-Commerce Payment System: Net Banking, Paypal, Google Wallet, Payment Cards: Charge, Debit, Credit, ATM, Store-Value, Fleet, etc.; Payment Service Provider and Payment Gateway

MULTIPLE CHOICE QUESTIONS (With Keys) 295-296

(Elective Modules)

Module I. **An Introduction to Programming in Python 297-320**

History of Python; Why to Learn Python?; Python Features; Setting up Python Environment; Basic Syntax: Identifiers, Reserver Words, Quotations, Comments, Multiline Statements, Command line arguments; Variables: Datatypes: Numbers, Strings, List, Tuples, Dictionaries, Date and Time;Conditional Statements: IF, IF...ELIF...ELSE, Nested If, Single Statement Suites;Loops: WHILE, FOR, Nested Loops, Single Statement Suites, BREAK, CONTINUE, PASS; Functions: Defining and Calling a function, Pass by reference or value, Arguments, Return statement; Modules, Input and Output Operations, Opening and Closing Files, Directories in Python

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) 318-319

PRACTICAL TYPE QUESTIONS 320

Module II. **An Introduction to Programming in JAVA 321-364**

History of JAVA, Why use JAVA?; OOPS in JAVA; Java Programming Features; Java Terminology; JVM Architecture; Bytes Codes; Class Path; Setting Up Environment in JAVA; JAVA Basic Syntax : Identifiers, Data Types, Literals, Variables, Keywords, Modifiers, Enums; Comments; Operators; Numbers; Characters; Strings; Arrays; Input-Output Streams; Directories; Decision Making; Loops;JAVA Objects; Classes; Nested Classes; Methods; Constructors; Inheritence; Overriding; Polymorphism; Abstraction; Encapsulation; Interface; Packages; Date and Times in JAVA

MULTIPLE CHOICE QUESTIONS (With Keys) ; Explanatory Notes (for MCQs) 360-363

PRACTICAL TYPE QUESTIONS 363-364