

KERALA PSC
JUNIOR INSTRUCTOR
COMPUTER OPERATOR & PROGRAMMING ASSISTANT (COPA)

TENTATIVE SYLLABUS

1. Safe working practices

Safety rules and safety signs - Types and working of fire extinguishers

2. Introduction to Computer components

Introduction to computer system - Concepts of Hardware and Software - Function of motherboard components and various processors - Various Input/ Output devices in use and their features

3. Introduction Windows Operating System

Introduction to operating System - Main features of Windows OS - Concept of various shortcut commands

4. Computer basics and Software Installation

Introduction to the booting process - Introduction to various types of memories and their features - Basic Hardware and software issues and their solutions - Usage of Application software and Antivirus

5. Introduction to DOS Command Line Interface & Linux Operating Systems

Introduction to basic DOS Internal and External Commands - Introduction to Open Source Software - Introduction to Linux Operating System features, structure, files and processes - Basic Linux commands

6. Word Processing Software

Introduction to the various applications in MS office - Introduction to Word features, Office button, toolbars - Creating, saving and formatting and printing documents using Word - Working with objects, macro, mail merge, templates and other tools in Word.

7. Spread Sheet Application

Introduction to Excel features and Data Types - Cell referencing and linking Sheets - Introduction to various functions in all categories of Excel - Concepts of sorting, filtering and validating data - Analyzing data using charts, data tables, pivot tables, goal seek and scenarios

8. Image editing, Presentations

Introduction to Open Office - Introduction to the properties and editing of images - Introduction to different formats of images and their uses - Introduction to Power Point and its advantages - Creating Slide Shows - Fine tuning the presentation and good presentation technique

9. Database Management Systems

Concepts of Data and Databases - Overview of popular databases, RDBMS, OODB and NOSQL - Rules for designing good tables - Integrity rules and constraints in a table - Relationships in tables - Introduction to various types of Queries and their uses - Designing Access Reports and Forms - Introduction to macros, designer objects controls, their properties and behavior

10. Networking Concepts

Introduction to Computer Networks, Necessity and Advantages - Client Server and peer to Peer networking concepts - Concept of Proxy Server and proxy firewall server - Concept of DHCP Server - Network topologies. Introduction to LAN, WAN and MAN - Network components, viz. Modem, Hub, Switch, Router, Bridge, Gateway etc - Network Cables, Wireless networks and Blue Tooth technology - Concept of ISO - OSI 7 Layer Model - Overview of various Network protocols Viz. TCP/IP, FTP, Telnet etc - Concept of Logical and Physical Addresses, Subnetting and Classes of Networks.

11. Internet Concepts

Introduction to www, Concept of Internet, Web Browsers, internet servers and search engines - Concepts of Domain naming Systems and E mail communication - Introduction to video chatting tools and Social Networking concepts

12. Web Design Concepts

Concepts of Static and Dynamic Web pages - Introduction to HTML and various tags in HTML - Concepts of different controls used in Web Pages - Concepts of CSS and applying CSS to HTML- Introduction to open source CMS viz, Joomla, Word press etc. and Web authoring tools viz. Kompozer, Front Page etc - Concept of good web page designing techniques.

13. Introduction to JavaScript

Introduction to Programming and Scripting Languages - Introduction to JavaScript and its application for the web - Introduction to Web Servers and their features - JavaScript Basics – Data types, Variables Constants and Conversion between data types - Arithmetic, Comparison, Logical Operators in JavaScript - Operator precedence - Program Control Statements and loops in JavaScript - Arrays in JavaScript – concepts, types and usage - The String data type in JavaScript. Introduction to String, Math and Date - Introduction to Functions in JavaScript - Built in JavaScript functions overview - Concepts of Pop Up boxes in JavaScript - Introduction to the Document Object Model - Concepts of using Animation and multimedia files in Java Script.

14. Introduction to VBA, Features and Applications.

Introduction to VBA features and applications - Properties, events and methods associated with the Button, Check Box, Label, Combo Box, Group Box, Option Button, List Box, Scroll Bar and Spin button controls - VBA Data types, Variables and Constants - Operators in VBA and operator precedence - Mathematical Expressions in VBA - Introduction to Arrays in VBA - Introduction to Strings in VBA - Conditional processing in VBA, using the IF, Else-if, Select Case Statements - Introduction to Loops in VBA - VBA message boxes and input boxes - Introduction to Creating functions and Procedures in VBA - Using the built in functions - Introduction to Object Oriented Programming Concepts. Concepts of Classes, Objects, Properties and Methods - The user forms and control in Excel VBA - Introduction to Debugging Techniques

15. Using Accounting Software

Basics of Accounting, Golden Rules of Accounting, Voucher Entry, Ledger Posting, Final Accounts Preparation - Cash Book. Ratio Analysis, Depreciation, Stock Management - Analysis of VAT, Cash Flow, Fund Flow Accounting - Introduction to Tally, features and Advantages - Implementing accounts in Tally - Double entry system of book keeping - Budgeting Systems, Scenario management and Variance Analysis - Costing Systems, Concepts of Ratios, Analysis of financial statements - Inventory Basics, POS Invoicing, TDS, TCS, FBT, VAT & Service Tax - Tally Interface in Different Languages.

16. E Commerce Concepts

Introduction to E-Commerce and advantages - Building business on the net - Payment and Order Processing, Authorization, Chargeback and other payment methods - Security issues and payment gateways

17. Cyber Security:

Overview of Information Security, SSL, HTTPS, Security threats, information Security vulnerability and Risk management - Introduction to Directory Services, Access Control, Security, Privacy protection, Audit and Security - Introduction to IT Act and penalties for cyber crimes.

This is a tentative syllabus prepared as per NIMI syllabus of COPA.

Final Syllabus will be published by Kerala PSC

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