



कौशल बलम्

SYLLABUS FOR THE TRADE OF

“COMPUTER SOFTWARE APPLICATIONS”

(Trade skill - I & Trade skill- II)

In

IT & ITES SECTOR

Under

CRAFT INSTRUCTORS TRAINING SCHEME

Redesigned in 2014

by

Directorate General of Employment and Training

Ministry of Labour and Employment

(Government of India)

New Delhi

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A . RATIONALE

The prime objective of this course is to prepare the trainees to be good guides for their trainees just not in learning the contents of the course but also in applying them efficiently.

Most software related jobs require knowledge and skill in more than one area. Today this demand is growing louder as a person with even a simple title like office assistant is expected to be proficient in areas like office automation, basic hardware, networking along with a good knowledge of databases. At times a person may be expected to work with databases and may be required to maintain or use web sites to work with these databases too.

The two CTS courses namely 'Database Administration Assistant' and 'Computer Operator and Programming Assistant' have been designed keeping in mind such requirement from almost all organizations, though not in bulk. A common instructor training programme for both these courses was mooted to arm the instructors of both trades with their trade related as well as extra added knowledge from the other relevant trade too. A common syllabus for the two courses DBSA and COPA will enable an Instructor to conduct training in relevant CTS trade very effectively.

A good instructor should not just be aware of the contents of the syllabus of his / her trade, but also should be proficient in some extra, useful and related areas which are necessary to apply to the knowledge passed on to trainees. The instructor is also supposed to guide trainees in projects at the end of the course. For the real utility and experience he may have to put to use various areas of the subject skills, which may be not part of the curriculum but very much needed for the project. To fulfill such needs, it has been decided to add something extra apart from the contents of the CTS syllabus, taking care that the instructor trainee is not overburdened with irrelevant topics.

Database is very necessary for any interactive website. Designing a database is the most crucial part of development. It is necessary to be designed before the actual coding begins for a high performance application. Before starting with the coding part of an application spending a good time with the designing of the database is a good practice. The development and design of the databases determines the performance and accuracy for the website. The programming without the knowledge of database is not successful as well as database management without the knowledge of programming concepts / techniques are not useful. This is the reason for including Databases and PHP in the first semester.

The topics on Networking have been covered extensively keeping in mind the importance of configuring and securing the networked systems and data against various types of intrusions and threats.

During the second semester, concepts of Java script, VBA and Tally are covered to enable the instructor to apply these when required in creating dynamic websites, using the power of VBA for Microsoft office applications etc.

As a major part of the syllabus has to be new during the second semester, programming in Java has been added. This not only enhances the instructor's knowledge about OOPS and event handling etc. but also prepares him to deliver the concept of integrating or using Java if needed in project works. This indirectly acts as a motivation for the trainee to learn the subject realizing its importance.

B. GENERAL INFORMATION

1. Name of the Trade : COMPUTER SOFTWARE APPLICATIONS
(consists of 2 Modules: TRADE SKILL – I & TRADE SKILL-II)
2. N.C.O. Code No. : New Course
3. Duration of CITS training : 2 Semesters each of 6 months
(Semester I: Trade Skill – I, Semester II: Trade Skill - II)
4. Power norms : 3.45KW for each workshop
5. Space norms : Class Rooms : one each for Trade Skill – I &
Trade Skill-II, each of size of 30 sq. m.
Workshops: one each for Trade Skill – I & Trade Skill-II
each of size of 84 sq. m.
6. Entry Qualifications : NTC/NAC in COPA/DBSA OR
Degree in Engineering in Computer
Science/ Information Technology or MCA/MSc
(Computer Science Computer / Information
Technology) / NIELIT “B” or equivalent
OR Diploma in engineering in Computer
Science/Information Technology OR BCA/BSc
(Computer Science/Information Technology) OR
equivalent.
7. Unit strength : 20 Trainees
8. Trainer’s Qualifications : Degree in Engineering in Computer
Science/Information Technology with 2 years
experience or MCA/MSc (Computer Science
/Information Technology) or NIELIT “B” or equivalent
with 2 years’ experience
OR
Diploma in Engineering in Computer
Science/Information Technology with 5 years
experience or BCA/B.Sc (Computer Science/Information
Technology) OR equivalent with 5 years
experience.

9. CTS trades for which corresponding CITS trade trained instructor will be eligible to teach

: i) Computer Operator & Programming Assistant (COPA)
- 1 year

OR

ii) Data Base System Assistant (DBSA) - 1 year

Note :

1. After passing this CITS course, a person having Degree/Diploma in Engineering or equivalent as defined in the Syllabus will be eligible to teach any of the above 2 CTS trades.
2. After passing this CITS course, the candidate with qualification NTC/NAC in the relevant CTS course is eligible to teach only the core CTS course which he has completed under CTS scheme.

C. SEMESTER WISE ALLOTMENT OF TIME & MARKS AMONG THE SUBJECTS

	SUBJECTS	Hrs. / Week	% of time allotted	Marks	Sessional	Full Marks	Pass Marks		
							Exam.	Sessional	Total
First semester	Trade Practical – 1	24	60	200	30	230	120	18	138
	Trade Theory - 1	6	15	100	20	120	60	12	72
	Vocational Calculation } Vocational Science	4	10	75	-	75	45	-	45
		4	10	75	-	75	45	-	45
	Library	2	5	-	-				
	TOTAL for Sem. - I	40		450	50	500	270	30	300
Second semester	Trade Practical – 2	16	40	200	30	230	120	18	138
	Trade Theory - 2	4	10	100	20	120	60	12	72
	Training Methodology - Practical	12	30	200	30	230	120	18	138
	Training Methodology - Theory + IT	6+2	20	100	20	120	60	12	72
	TOTAL	40		600	100	700	360	60	420
	GRAND TOTAL	80		1050	150	1200	630	90	720

D. Syllabus for the trade: Computer Software Applications for Semester -1

Trade Skill – I

Duration: 6 months(22 weeks)

Sl.No	Trade Theory	Hours	Trade Practical	Hours
1	<p>Network Architecture</p> <ul style="list-style-type: none"> • Layering & Protocols. • OSI & Internet Architecture. • Network topology • Link & Medium Access protocols, IEEE 802 standards, Performance issues • Network Adaptors. Circuit switching - packet switching. • Internetworking - bridges - Internet protocol - Addressing - Routing Protocols. • UDP - TCP- Congestion Control - Presentation aspects. 	8	<p>Network Architecture</p> <p>Practice on</p> <ul style="list-style-type: none"> • Straight Cabling and Cross cabling. • Switch Configuration. • LAN and WAN setup. • Setting TCP/IP. 	24
2	<p>Applications & Network Management:</p> <ul style="list-style-type: none"> • Telnet, FTP – e-mail – DNS. • Multimedia Applications • Security, Monitoring & Control • SNMP V2 and V3, RMON, RMON2. • The wireless channel - Link level design - Channel access Network design - Standards. • Optical Networks - Cross connects – LANS 	8	<p>Applications & Network Management:</p> <p>Practice on</p> <ul style="list-style-type: none"> • Network Monitoring and Control (SNMP, V2, V3, RMON, RMON2). • Wireless Networking Design • Implementing Voice over IP • Configuring DHCP 	32

	<ul style="list-style-type: none"> • Voice Over IP – Multimedia Networks. • Introduction to VPN and DHCP 			
3	<p>Network Security</p> <ul style="list-style-type: none"> • Attacks, Services and Mechanisms, Security Attacks, Security Services, Integrity check, Digital Signatures, Authentication. • Concept of Cryptography. • Hash Function • SSL Protocol • Intrusions and Viruses, Firewalls, Intrusion Detection. 	8	<p>Network Security</p> <p>Practice on</p> <ul style="list-style-type: none"> • Configuring Network Security for preventing Attacks. • Setting password policy • Sniffing on Switched Networks • IP Address Spoofing • DNS Spoofing • Password Cracking: Dictionary vs Brute-Force vs Hybrid methods • Handling Denial of Service • Using Tools like John the Ripper, Cain & Abel etc. • Configuring Firewalls 	24

4	<p>Database Concepts</p> <ul style="list-style-type: none"> • Concept of DBMS, RDBMS • Data Models, Concept of DBA, Database Users • ER Model & Diagram, Database Schema • Designing Database using Normalization Rules • Various data types Data integrity, DDL DML and DCL statements. • Enforcing Primary key and foreign key. • Adding Indices 	16	<p>Database and MySql</p> <p>Practice on</p> <ul style="list-style-type: none"> • Installation of MySQL • Troubleshooting basic installation issues. • Creation and use of database • Designing of tables. • Applying data integrity rules • Using the DDL and DML statements • Enforcing constraints, primary key and foreign key • Adding indices to Tables. 	32
5	<p>Queries</p> <ul style="list-style-type: none"> • Concepts of Transactions • ACID Property of Transaction • Constraints 	8	<p>Queries</p> <p>Practice on</p> <ul style="list-style-type: none"> • Simple select queries • Insert and delete queries • Update queries 	32
6	<p>Joins and Functions</p> <ul style="list-style-type: none"> • Joining of tables • Sub Queries • Functions used in query like sum, average, max, min, count etc. • Indexing and Query Optimization. 	8	<p>Joins and Functions</p> <p>Practice on</p> <ul style="list-style-type: none"> • Using the Number, Date and Character functions. • Joins, Group by, Having, Subquery. • Indexing and Optimizing Query 	48
7	<p>Stored Procedures, Triggers and Cursors</p> <ul style="list-style-type: none"> • Introduction to Stored Procedures 	16	<p>Stored Procedures, Triggers and Cursors</p> <p>Practice on</p> <ul style="list-style-type: none"> • Creating and using stored procedures 	64

	<ul style="list-style-type: none"> • Introduction to Triggers and Cursor • Creating Trigger • Creating Cursor • Using Cursor 		<ul style="list-style-type: none"> • Creating and executing mysql table level triggers • Creating cursors in mysql • Using cursors in mysql • Implementing mysql security • Simple application on Database using SP, Triggers, Cursors and Indexing 	
8	<p>Introduction to Java Script</p> <ul style="list-style-type: none"> • Introduction to JavaScript • Java Script Syntax, Variables, Operators and Expression • Control Flow • Functions • Concept of Object oriented Development • Concept of DOM • Forms and Java Script 	12	<p>Introduction to Java Script</p> <p>Practice on</p> <ul style="list-style-type: none"> • Using the Java Script Syntax. • Using Variables, Operators and Writing Expressions • Programming with Control Flow statements • Creating and using Objects in Java Script • Creating and using Functions • Using Java Script with Forms 	48
9	<p>Java Script and dynamic web pages</p> <ul style="list-style-type: none"> • Concept of Cookies • Cascaded Style Sheets • Error Handling in Java Script • Concept of AJAX 	8	<p>Java Script and dynamic web pages</p> <p>Practice on</p> <ul style="list-style-type: none"> • Creating Cookies with Java Script • Creating CSS • Error Handling in Java Script • Implementing an AJAX application 	64

10	<p>Hypertext Preprocessor</p> <ul style="list-style-type: none"> • Introduction to PHP and PHP configuration file • Basic PHP Syntax - Variables, • Data Types, Super Global Variables, • PHP Functions, PHP Operators • Creating Dynamic pages with PHP • Creating Dynamic Pages • Flow Control and Loops. • Arrays in PHP 	12	<p>Hypertext Preprocessor</p> <p>Practice on</p> <ul style="list-style-type: none"> • Installing a web server on your PC then Installing PHP • Creating files to test the use of PHP variables and data types • Creating files to use Built in functions • Creating Dynamic Pages • Using Flow Control statements • Creating Loops in PHP • Creating and using arrays 	64
11	<p>PHP Forms</p> <ul style="list-style-type: none"> • PHP and HTML Forms • String Manipulating Functions • Magic Quotes • Including Files • User Functions in PHP • Form processing 	16	<p>PHP Forms</p> <p>Practice on</p> <ul style="list-style-type: none"> • Creating PHP & HTML Forms • Using String Manipulating Functions • Enabling and Disabling Magic Quotes • Using the include statement in PHP • Working with user functions • Designing and processing forms 	64
12	<p>PHP Database connection, mail and file management</p> <ul style="list-style-type: none"> • PHP connection to MySql • PHP querying databases • Using PHP regular expressions 	12	<p>PHP Database connection, mail and file management</p> <p>Practice on</p> <ul style="list-style-type: none"> • Connecting to MySql server with PHP • Querying a Database 	32

	<ul style="list-style-type: none">• PHP Cookies• PHP Sessions• PHP mail() function and sending mail• PHP File operations		<ul style="list-style-type: none">• Create a basic user authentication system using PHP and MySQL.• Using regular expressions.• Create and retrieve cookies• Starting and storing PHP sessions• Sending Mail with PHP• Creating, reading, uploading and editing files in PHP	
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E. LIST OF TOOLS & EQUIPMENT FOR TRADE SKILL - I

Sl.No	Name of the item	Quantity
1	Desktop Computers of the latest configuration prevalent at the time of procurement or with the following minimum features: CPU: 32/64Bit Core2Duo/Quad Core/i3/i5, Speed: 3GHz or Higher.CacheMemory:- Minimum3MBorbetter.RAM:-8GBDDR-IIIorHigher.HardDiskDrive:500GBor Higher, 7200 rpm (minimum) or Higher, Wi-Fi Enabled. Network Card: Integrated Giga bit Ethernet (10/100/1000) - Wi-Fi, USB Mouse, USB Keyboard and Monitor (Min.22Inch), Standard Ports and connectors. DVD Writer, Speakers And Mic. Licensed Windows Operating System/OEM Pack(Preloaded),Antivirus/Total Security	13 Nos. (12 for lab and one for classroom)
2	Laptop, 4 th Gen Ci5 Processor, 4GB RAM,1TB HardDisk,Win8 Preloaded Licensed OS,2GB Graphics Card, DVD Writer, Standard Ports And Connectors.	01 No.
3	Wi-Fi Router AND 24Port Switch With Wireless Connectivity option	01 No.
4	Structured cabling (to enable working with Wired Networks too for Practicals)	As required
5	Internet or Intranet Connectivity	As required
6	Laser Printer Monochrome A4 Size	01 No.
7	Network Monochrome Laser Printer A4 Size	01 No.
8	Optical Scanner(Flatbed A4)	01 No.
9	DVD or Blu-Ray Writer	02 Nos.
10	LCD / LED (Or Latest) Projector with matte (antiglare) screen	02 Nos (One each for classroom and lab)
11	2KVA online UPS	02 Nos.

12	Cable crimping tool	02 Nos.
13	Standalone Hard Disks 500 GB or Higher	02 Nos.
14	Network Rack	01 No.
15	Standard Screw Driver Set	02 Nos.
16	LAN Setup	As required
Software per Unit		
1	MySql Open Source	12 Users
2	PHP Open Source	12 Users
3	Browser Open Source	12 Users
4	Web Server : Apache Server /Any HTTP Web server / XAMPP or any other similar server Open Source	12 Users
5	WYSIWYG Web Designer or Dreamweaver or any Open source tools like Kompozer, FrontPage express / Word press or similar tools along with FTP tools for ex. Filezilla etc.	12 Users
6	MS OFFICE 2010 or Latest Version	12 Users
7	Antivirus software - licensed	12 Users

Provision must be made for

1. Domain name registration and its renewal from time to time for hosting and testing the web sites created by the trainees as part of the syllabus.
2. Licensed Antivirus software - Renewal or new procurement, as the situation demands, from time to time upon expiry of validity period.

F. FURNITURE AND ACCESSORIES FOR TRADE SKILL - I

Sl. No	Name of the Item	Quantity
1	Hand Held Vacuum cleaner	01 No
2	Pigeon hole cabinet: 20 compartments	01 No
3	Chair and table for the instructor	01 each-for Class room & lab
4	Dual Desk or Chair and Tables for Trainees for Class Room	12/24Nos
5	Computer table laminated top 150 X 650 X 750 mm (or similar size) with sliding tray for key board and one shelf for storage for the lab	13 Nos (12 for lab and 1 for classroom)
6	Operators chair (mounted on castor wheels, Adjustable height) for the lab	24 Nos
7	Printer table 650 X 500 X 750 mm can be varied as per local specifications	03 Nos
8	Split type Air conditioners 1.5 tons for the lab	03 Nos
9	Storage cabinet 60 X 700 X 450 mm	01 Nos
10	White Board	02 nos. 01 each-for Class room & lab
11	Steel Almirah	01 No.
Raw material for a batch of 20 trainees for one semester		
1	White Board Markers	As required
2	Duster Cloth(2'by 2')	As required

3	Cleaning Liquid 500ml	As required
4	Xerox Paper(A4)	As required
5	Full Scape Paper(White)	2 reams
6	Cartridges for printer	As required
7	RJ45 Jacks	200 Pcs
8	Optical Mouse(USB/PS2)	As required
9	Key Board (USB/PS2)	As required
10	SMPS	As required
11	CMOS Batteries	As required
12	3Pin Power Chord	As required
13	Cat6/5/5e cable	100 meters
14	Stapler Small	2 Pcs
15	Stapler Big	1 Pc
16	AAA battery for remote	As required
17	AA battery for clock	As required
18	8 GB pen drives	2Nos
19	CDs	50Nos
20	DVDs	50 Nos.
21	Wall Clock	1Pc

G.Syllabus for the trade: Computer Software Applications for Semester-2

Trade Skill - II

Duration: 6 months(22 weeks)

Sl. No	Trade Theory	Hours	Trade Practicals	Hours
1	<p>Introduction to VBA, Features and Applications.</p> <ul style="list-style-type: none"> • Introduction to VBA features and applications. • VBA Data types, Variables and Constants. • Operators in VBA and operator precedence. • Mathematical Expressions in VBA. • Introduction to Strings in VBA. • Introduction to Arrays in VBA. • Conditional processing in VBA, using the IF, Elseif, Select... Case Statements. • Introduction to Loops in VBA. • VBA message boxes and input boxes. 	8	<p>Programming with VBA</p> <p>Write code to</p> <ul style="list-style-type: none"> • use VBA Data types, Variables, Operators and Constants. • work with string variables in VBA. • create and manipulate arrays in VBA. • use the mathematical, conversion, date and string functions in VBA. • work with conditional statements like If. Elseif, Select ... Case statements in VBA. • use the control structures for looping in VBA. • create Message boxes and Input boxes in VBA. 	24
2	<p>Functions and methods</p> <ul style="list-style-type: none"> • Introduction to functions and procedures in VBA. • Using the built in functions. • Creating and editing macros. • Debugging Techniques. 	4	<p>Functions and methods</p> <p>Write code to</p> <ul style="list-style-type: none"> • Create functions and procedures. • Pass parameters and use returned data • Use VBA built in Functions in Programmes • Create and edit macros 	24

			<ul style="list-style-type: none"> • Debugging 	
3	<p>Forms, controls and events driven programming</p> <ul style="list-style-type: none"> • Introduction to Object Oriented Programming Concepts. Concepts of Classes, Objects, Properties and Methods. • The user forms and control in Excel VBA. • 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. • Events and Event driven programming concepts. • Overview of ActiveX Data objects. 	8	<p>Forms, controls and event driven programming</p> <ul style="list-style-type: none"> • Create forms with basic controls. • Modify the properties of the form and controls at design time. • Create controls and modify their properties at run time. • Write programs with methods and events. • Use ActiveX controls. • Design a simple project involving MS Excel and VBA. 	32
4	<p>Object Oriented Programming and JAVA Language</p> <ul style="list-style-type: none"> • Object Oriented Programming with Core Java • Java Programming features • JVM, Byte codes and Classpath • Java Program Development • Compilation and Execution of JAVA programs • Basic JAVA language elements – keywords, comments, data types and variables. • JAVA Arithmetic, Assignment, Relational, Logical, Increment / Decrement operators and expressions. • JAVA String Operators • JAVA Input and Output streams, System.in, System.out. • Input using Scanner class and Console class methods 	8	<p>Object Oriented Programming and JAVA Language</p> <ul style="list-style-type: none"> • Installing JAVA • Setting the Classpath • Writing and Executing a simple JAVA Program to display “Hello” <p>Write JAVA programs to :</p> <ul style="list-style-type: none"> • use various data types in JAVA • use various operators in JAVA • create and use Local, Instance and Class variables. • read text from the keyboard using scanner class • read text from the keyboard using console class 	24

5	<p>JAVA Program Flow Control</p> <ul style="list-style-type: none"> • Decision making and flow control using if...then, if ..then..else, nested if, switch case and the conditional ternary operators in JAVA. • Loop control flow using while – do, do – while loops, for loop, using the break, continue statements. • Terminating the JAVA program. • JAVA Number, Character and String Classes • Arrays in JAVA 	4	<p>JAVA Program Flow Control</p> <p>Write JAVA programs to :</p> <ul style="list-style-type: none"> • use the if and if ... else statements • use the Switch statement • use the Do ... While and While – do loops. • use the For Loop • use the Break and Continue Keywords • use the JAVA Numbers Class methods • use the JAVA Character Class methods • use the JAVA String Class methods • create and use arrays. 	32
6	<p>JAVA Classes, Overloading and Inheritance</p> <ul style="list-style-type: none"> • JAVA Objects, Classes and Methods • Passing data and objects as parameters to methods • Method Overloading • Constructors and Overloaded constructors • Inheritance in JAVA • Method Overriding in JAVA 	8	<p>JAVA Classes, Overloading and Inheritance</p> <p>Write JAVA programs to :</p> <ul style="list-style-type: none"> • Create and use simple classes, objects and methods in JAVA • pass data and Objects to Methods • return data and Objects from Methods • use constructors in JAVA • create and use Overloaded methods in JAVA • create and use a simple inherited class • override methods in JAVA • create and use Superclass in JAVA 	32

7	<p>Multithreading and Exception Handling in JAVA</p> <ul style="list-style-type: none"> • Thread concept and life cycle of thread. • Extending thread class and using thread methods • Thread priority and runnable Interface • Multithreading and Synchronization • Exception Handling concepts and hierarchy • Exception types and methods • Concepts of “ try, catch and throw and finally” in exceptions • User defined exceptions 	4	<p>Multithreading and Exception Handling in JAVA</p> <p>Write JAVA programs to :</p> <ul style="list-style-type: none"> • create and run a thread • create a thread by extending Thread class • create thread by implementing Runnable interface • use major thread methods • test multithreading with and without synchronization • handle common exceptions • use multiple try – catch blocks • use the “throw” and “finally” keywords • handle user defined exceptions 	24
8	<p>Abstract Classes and Interfaces in JAVA</p> <ul style="list-style-type: none"> • Concept of Virtual methods. • Concept of Abstract classes and methods • Features of Abstract Classes • JAVA Interfaces and their advantages • Method Overriding in JAVA • Polymorphism in JAVA • Creating , implementing and extending interfaces • Creating and using Packages in JAVA 	8	<p>Abstract Classes and Interfaces in JAVA</p> <p>Write JAVA programs to :</p> <ul style="list-style-type: none"> • create and use virtual methods. • create abstract classes and methods • create interfaces in JAVA • override methods in JAVA • create and implement an interface • extend interfaces in JAVA • create and use a package in JAVA 	24
9	<p>Abstract Windowing Tool Kit</p> <ul style="list-style-type: none"> • Introduction to user interface and AWT components and containers • Introduction to AWT UI controls, hierarchy and their features 	8	<p>Abstract Windowing Tool Kit</p> <p>Write JAVA programs to :</p> <ul style="list-style-type: none"> • create a simple container using Frame class and extending another Frame class • create a container with a few controls 	32

	<ul style="list-style-type: none"> • Introduction to event handling • Introduction to event handling classes • Introduction to event listener interfaces • Introduction to AWT Layouts 		<ul style="list-style-type: none"> • create a container with controls with action listeners and event handlers • create a GUI to draw different plane shapes over a predefined area 	
10	<p>Accounting principles</p> <ul style="list-style-type: none"> • Concepts and importance of accounting and book keeping. • Introduction to the common accounting terms: business, capital, price, value, debit, credit, income, expenditure, profit, loss. • Accounting heads, accounting equation and types of accounts. • Rules and principles of debit and credit. • Double entry bookkeeping and balance sheet. • Introduction to Journals, Voucher Entry, Ledger Posting, Final Accounts Preparation. • Cash Book. Ratio Analysis, Depreciation, Stock Management. • Introduction to VAT, Cash Flow, Fund Flow Accounting. 	8	<p>Accounting principles</p> <p>Practice of</p> <ul style="list-style-type: none"> • Identifying types of accounts • Making journal transactions • Perform double entry bookkeeping • Create a ledger • Create a Journal • View different reports like Balance Sheet, P&L A/c, Day Books 	24
11	<p>Introduction to Smart Accounting</p> <ul style="list-style-type: none"> • Introduction to Tally, features and Advantages. • Implementing accounts in Tally. • Double entry system of bookkeeping using Tally 	8	<p>Using Accounting Software - 1</p> <ul style="list-style-type: none"> • Familiarization with the Tally interface. • Company creation, Account Creation, Voucher Entry in Tally. • Report Generation (Creating statements like Invoice, Bill, Profit & Loss account etc.). • Performing Cost Centre & Cost Category management. 	24

12	<p>Using Accounting Software</p> <ul style="list-style-type: none"> • 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 Processing in Tally. • Tally Interface in Different Languages. 	4	<p>Using Accounting Software - 2</p> <ul style="list-style-type: none"> • Managing Budgeting Systems. • Scenario management and Variance Analysis. • Using Tally for Costing, Ratio Analysis, Cash Flow, Funds Flow Statements. • Analyzing and Managing Inventory. • Performing Point of Sales and Taxation. Performing Systems Administration and using other Utilities, User creation, Backup & Restore of Company. • Using the Multilingual Functionality 	32
13	Designing a Project with JAVA/PHP/MYSQL (Design and Documentation)	8	Project on JAVA/PHP/MYSQL (Implementation)	24

H. LIST OF TOOLS & EQUIPMENT FOR TRADE SKILL - II

Sl.No	Name of the item	Quantity
1	Desktop Computers of the latest configuration prevalent at the time of procurement or with the following minimum features: CPU: 32/64Bit Core2Duo/Quad Core/i3/i5, Speed: 3GHz or Higher.CacheMemory:- Minimum3MBorbetter.RAM:-8GBDDR-IIIorHigher.HardDiskDrive:500GBor Higher, 7200 rpm (minimum) or Higher, Wi-Fi Enabled. Network Card: Integrated Giga bit Ethernet (10/100/1000) - Wi-Fi, USB Mouse, USB Keyboard and Monitor (Min.22Inch), Standard Ports and connectors. DVD Writer, Speakers And Mic. Licensed Windows Operating System/OEM Pack(Preloaded),Antivirus/Total Security	13 Nos. (12 for lab and one for classroom)
2	Laptop, 4 th Gen Ci5 Processor, 4GB RAM,1TB HardDisk,Win8 Preloaded Licensed OS,2GB Graphics Card, DVD Writer, Standard Ports And Connectors.	01 No.
3	Wi-Fi Router AND 24Port Switch With Wireless Connectivity option	01 No.
4	Structured cabling (to enable working with Wired Networks too for Practicals)	As required
5	Internet or Intranet Connectivity	As required
6	Laser Printer Monochrome A4 Size	01 No.
7	Network Monochrome Laser Printer A4 Size	01 No.
8	Optical Scanner(Flatbed A4)	01 No.
9	DVD or Blu-Ray Writer	02 Nos.
10	LCD / LED (Or latest) Projector with matte (antiglare) screen	02 Nos. (one each for lab and classroom)

11	2KVA online UPS	02 Nos.
12	Cable crimping tool	02 Nos.
13	Standalone Hard Disks 500 GB or Higher	02 Nos.
14	Network Rack	01 No.
15	Standard Screw Driver Set	02 Nos.
16	LAN Setup	As required
Software per Unit		
1	MySql Open Source	12 Users
2	PHP Open Source	12 Users
3	Browser Open Source	12 Users
4	Web Server : Apache Server /Any HTTP Web server / XAMPP or any other similar server Open Source	12 Users
5	WYSIWYG Web Designer or Dreamweaver or any Open source tools like Kompozer, FrontPage express / Word press or similar tools along with FTP tools for ex. Filezilla etc.	12 Users
6	MS OFFICE 2010 or Latest Version	12 Users
7	JDK 7 or latest Version (Open Source)	12 Users
8	Tally ERP 9 or Latest Version	12 Users
9	Antivirus software - licensed	12 Users

Provision must be made for

3. Domain name registration and its renewal from time to time for hosting and testing the web sites created by the trainees as part of the syllabus.
4. Licensed Antivirus software - Renewal or new procurement, as the situation demands, from time to time upon expiry of validity period.

I. FURNITURE AND ACCESSORIES FOR TRADE SKILL - II

Sl. No	Name of the Item	Quantity
1	Hand Held Vacuum cleaner	01 No
2	Pigeon hole cabinet: 20 compartments	01 No
3	Chair and table for the instructor	01 each-for Class room & lab
4	Dual Desk or Chair and Tables for Trainees for class room	12/24Nos
5	Computer table laminated top 150 X 650 X 750 mm (or similar size) with sliding tray for key board and one shelf for storage for lab	13 Nos. (12 for lab and one for classroom)
6	Operators chair (mounted on castor wheels, Adjustable height) for lab	24 Nos
7	Printer table 650 X 500 X 750 mm can be varied as per local specifications	03 Nos
8	Split type Air conditioners 1.5 tons for lab	03 Nos
9	Storage cabinet 60 X 700 X 450 mm	01 Nos
10	White Board.	02 Nos. 01 each-for Class room & lab
11	Steel Almirah	01 No.
Raw material for a batch of 20 trainees for one semester		
1	White Board Markers	As required
2	Duster Cloth(2'by 2')	As required

3	Cleaning Liquid 500ml	As required
4	Xerox Paper(A4)	As required
5	Full Scape Paper(White)	2 reams
6	Cartridges for printer	As required
7	RJ45 Jacks	200 Pcs
8	Optical Mouse(USB/PS2)	As required
9	Key Board (USB/PS2)	As required
10	SMPS	As required
11	CMOS Batteries	As required
12	3Pin Power Chord	As required
13	Cat6/5/5e cable	100 meters
14	Stapler Small	2 Pcs
15	Stapler Big	1 Pc
16	AAA battery for remote	As required
17	AA battery for clock	As required
18	8 GB pen drives	2Nos
19	CDs	50Nos
20	DVDs	50 Nos.
21	Wall Clock	1Pc

J. LIST OF TRADE COMMITTEE MEMBERS

Sl. No.	Name & Designation Sh/Mr/Ms.	Organization	Mentor Council / Core Group Designation
1	Dr. Sanjeev Kumar Gupta Head, Technical Wing	National Institute of Electronics and Information Technology, Electronics Niketan, 6, CGO Complex New Delhi 110 003	Chairman ,Mentor Council
2	Mr. Rajeev Menon, Sr. Director	Cognizant Technology Solutions India Pvt. Ltd. 12th & 13th Floor, "A" wing, Kensington Building, Hiranandani Business Park, Powai, Mumbai - 400 076	Member ,Mentor Council
3	Mr. Srikantan Moorthy SVP & Head - Education & Research	Infosys Electronics City, Hosur Road Bangalore 560 100	Member ,Mentor Council
4	Mr. Deepak Jain Senior VP & Global Head- Work Force Planning	WIPRO, Doddakannelli Sarjapur Road, Bangalore - 560 035	Member, Mentor Council
5	Mr. K. Ganesan Vice President -Human Resources,	Tata Consultancy Services Ltd.,200FtThoraipakkam-Pallavaram Ring Road,Thoraipakkam,Chennai-600 096,Tamil Nadu	Member, Mentor Council
6	Saurabh Joshi,G.M.	Accenture Services Pvt. Ltd. 7th floor , tower c, building no. 8,DLF Cybercity Phase II, Gurgaon-122002	Member ,Mentor Council
7	Mr. Ravi Shankar B.	Mind Tree Ltd, Global Village RCVE Post, Mysore Road, Bangalore 59	Member ,Mentor Council
8	Umesh Gupta,CEO	Open Software Technology(India) Ltd.,512,PhaseV,Udyog Vihar,Gurgaon-122016	Member ,Mentor Council
9	Prof. S.C. De Sarkar	Indian Institute of Technology Bhubaneswar Bhubaneswar-751 013	Member ,Mentor Council

10	Dr. Arti Kashyup Associate Professor	Indian Institute of Technology Mandi, PWD Rest House, Near Bus Stand Mandi - 175 001, Himachal Pradesh	Member ,Mentor Council
11	Dr. B. Mahanty Professor	Indian Institute of Technology Kharagpur Kharagpur ,India - 721302	Member ,Mentor Council
12	Dr. Narayanaswamy N S Associate Professor	D/o Computer Science and Engg Indian Institute of Technology Madras, IIT P.O., Chennai -600 036	Member ,Mentor Council
13	Prof. Ashis.k. Pani, Professor	XLRI Jameshepur, Road Number 1, Circuit House Area, Sonari, Jameshepur, Jharkhand-831011	Member ,Mentor Council
14	S.K. Pradad, System Analyst	National Institute of open Schooling A-24-25, Institutional Area, Sector-62, NOIDA - 201309	Member ,Mentor Council
15	Pramod Tripathi, Senior Executive Officer	National Institute of open Schooling A-24-25, Institutional Area, Sector-62, NOIDA - 201309	Member ,Mentor Council
16	Ms. Koushalya Barik, Assistant Director(Academic)	National Institute of Open Schooling, A-24-25, Institiutioal Area, Sector-62 NOIDA-201309	Member ,Mentor Council
17	Naresh Chandra, JDT	DGET,New Delhi	Mentor, Core Group
18	Dr. M. Jayprakasan, Dy. Director of Training	ATI Chennai	Leader, Core Group
19	B.K.Singha, Dy. Director of Training	CSTRI, Kolkata	Member, Core roup
20	N.Sundararajan,DPA Gr.B	NIMI, Chennai	Member, Core Group
21	Valluru Babu, Dy. Director of Training	DGET,New Delhi	Member, Core Group
22	Smt.A.K.V.Annapurna, Training Officer	ATI ,Hyderabad	Member, Core Group

23	Sk. Altaf Hossain, Training Officer	ATI, Howrah	Member, Core Group
24	B. Biswas , Vocational Instructor	RVTI, Kolkata	Member, Core Group
25	Sanjay Kr. Gupta, Vocational Instructor	RVTI , Vadodara	Member, Core Group
26	S.K. Acharya, Vocational Instructor	NVTI ,Noida	Member, Core Group
27	Smt P.Narmada, Vocational Instructor	RVTI, Bangalore	Member, Core Group
28	AnvarMuhmed, Vocational Instructor	RVTI, Trivandrum	Member, Core Group
29	P.T. Noushad, Assistant Training Officer,	ITI (W), Coimbatore	Member, Core Group
30	Kunal Shanti Priya, Vocational Instructor	ITI, Daltonganj, Redma, Daltonganj -822101	Member, Core Group