DISA Institute of Science & Technology (DIST)

Course Curriculum and Syllabus

One Year Technical Training Course

Plot no. # 45, Road no. # 7, Block-A, Pallabi, Mirpur-12, Dhaka-1216
Mobile no:- 01708-449950, 01708-449867, 01709-389 095,
E-mail:- dist@disabd.org, Website: www.distbd.org

DISA Institute of Science & Technology (DIST)
Course Information.

a. Name of the Trade:

- **Electrical**: Electrical installation and maintenance.
- **Computer:**
  Group- A: MS Office, Networking and Hardware maintenance.
  Group- B: MS Office, Graphic design and Outsourcing.
  Group- C: MS Office, Website design & development and Outsourcing.
- **Refrigeration & Air Conditioning:** Domestic Refrigerators, window type air-conditioner, split type air-conditioner, air- cooler and water chiller repair and servicing.
- **Motorcycle repair & servicing:** Different companies different model motor cycle repair, re-assemble, assemble and servicing.

b. Course Curriculum:

- **Course Duration :** 1 Year
- **Age group :** 17-27 Years
- **Class Time :** 9 am to 5 pm
- **Educational level :** Min Class VIII – H.S.C
- **Batch size :** 40 (seats)
- **Target Group / Trainees Selection:**
- DISA members : 25 (seats)
- On payment group -15 (seats)
- Course Fee 3000/ per month for OPG.

c. Preparation of Syllabus .
d. Tool, equipment machineries & material list preparation with costing.
e. Lab / workshop furniture list with costing.
f. DTTI organogram preparation.
g. Recruitment of training and support staffs.
h. Training course commencing date.
i. Certificate preparation.

- Certificates Design.
- Certificates printing.
- Certificates writing .
- Certificates distribution.

j. Inventory Management

- Tools and Material Storing.
- Record Keeping.
- Inventory planning.
- iv) Tools Damage report.

k. Damage tools replacement procedure.

- Damage from design.
- Tool damaged adjustment procedure.

l. Academic council function.
- Academic committee selection.
- Class program preparation.
- Curriculum follow up.
- Meeting conducting.
- Question paper preparation.
- Examination schedule preparing.
- Examination conducting.
- Answer sheet marking.
- Result preparation.
- Merit grading.
- Result out.
- Certificate writing.
- Certificate distribution.

m. Audit management.
- Internal.
- External.

n. Students teacher record management.

o. Staff development training.
- Inside training.
- In the country training.
- Out side the country training.

Prepared By

Md. Atiar Rahman

Course Curriculum for
One Year Technical Training Course

1. Name of the Trade:

- **Electrical:** Electrical installation and maintenance.
- **Computer:**
  Group- A: MS office, networking and hardware maintenance.
  Group- B: MS office, graphic design and outsourcing.
  Group- C: MS office, website design & development and outsourcing.
- **Refrigeration & Air Conditioning**: Domestic Refrigerators, window type air-conditioner, split type air-conditioner, air-cooler and water chiller repair and servicing.
- **Motorcycle repair & servicing:** Different companies different model motor cycle repair, re-assemble, assemble and servicing.

2. Course Duration : One Year (9 Months training and 3 month Industrial attachment training).

3. Batch Size : 40 (Male/Female) per trade.

pers **4. Mode of Training** : Residential / Non residential

5. Education : Computer- HSC passed.
Electrical (Electrical installation and maintenance) &
Refrigeration & Air Conditioning - S.S.C passed.
Motorcycle repair & servicing trade - Class Viii passed

6. Age Group : 17 to 27 Years

7. Training Time : 6 (Six) days a week
Saturday to Thursday)
9.00 am to 5.00 pm

8. Knowledge & Skilled training ratio: 20% & 80%.

9. Training Subjects Marks distribution:

1. Trade Skills &Technical drawing : 80% Marks

2. Trade Knowledge : 15% Marks

3. Spoken English : 03% Marks

4. Value education : 02% Marks

Total : 100% Marks

10. Training time : 9 am -1 pm : 4 hours training

1 pm - 2 pm : 1 hour lunch

2 pm – 5 pm : 3 hours training

Total : 8 hours

Total Training : 7 hours

11. Training hour distribution : knowledge : 400 hours

Skills : 1600 hours

Total : 2000 hours

12. Weekly Class Routine :

Day	Subjects	Time Duration	Resource Persons
Saturday	Trade knowledge	09 am – 10:30 am (2hrs)	Trade Instructor
	Trade Skill	10:30 am – 05 pm (5hrs)	Trade Instructor
Sunday	Trade Drawing	09 am – 10:30 am (2hrs)	Trade Instructor
	Trade Skills	10:30 am – 05 pm (5hrs)	Trade Instructor
Monday	Spoken English	09 am – 10:00 am (1hr)	Guest Speaker

	Trade Skills	10:00 am – 05 pm (6:hrs)	Trade Instructor
Tuesday	Trade knowledge	09 am – 10:30 am (1.5hrs)	Trade Instructor
	Trade Skills	10:30 am – 05 pm(5:30hrs)	Trade Instructor
Wednesday	Value Education	09 am – 10 am (1hrs)	Guest Speaker
	Trade Skills	10 am – 05 pm (6hrs)	Trade Instructor
Thursday	Trade Skills	09 am – 05 am (7hrs)	Trade Instructor

13. Examination

Monthly test : 8 test

Semester final : 1 test

14. Marks distribution : Monthly test : 50%
Semester final test : 50%

15. Result grading :

A+	=	90% to 100%
A	=	80% to 89%
B+	=	70% to 79%
B	=	60% to 69%
C	=	Below 60% Fail

16. **Certificate awarded** : After Successfully completion of the course DIST will be provided the Certificate.

Syllabus for

Computer: Group- A: MS office, Networking and Hardware maintenance.

Month- 1

Basic application of MS Office

- Introduction of a Computer System and history.
- Knowledge about Computer Technology.
- Operation of Computer System.
- Occupational safety and health (OSH).
- Knowledge on Computer Software.
- Knowledge on Computer Hardwire.

MS Word

- Introduction on MS Word.
- *Create a new document.*
- *Edit and format text.*
- *Change the page layout, background and borders.*
- *Insert headers and footers.*
- *Insert and edit tables.*
- *Insert clip art and pictures to documents.*
- *Perform a mail merge.*
- *Share and review shared document files.*
- *Touch typing skill development in Bangla & English.*

MS Excel

- Getting Started with Excel.
- Opening a Blank or New Workbook, General Organization.
- Highlights and Main Functions: Home, Insert, Page Layout, Formulas.
- Highlights and Main Functions: Data, Review, View, Add-Ins.
- Using the Excel Help Function.
- Working With Entering, Editing, Copy, Cut & Paste.
- Saving, Page Setup, and Printing.
- Basic Formulas and Use of Functions.
- Managing, Inserting, and Copying Worksheets.
- Securing the Excel Document (Protect Cells and Workbook).

Month - 2

MS PowerPoint

- Introduction on MS Power Point.

- Demonstrate understanding of the terminology and elements of presentations.
- Distinguish between the different options available for creating a presentation.
- Utilize the basics of a slide show including goals and effectiveness of a presentation.
- Create and manipulate text and text boxes using available tools and features.
- Employ the use of themes, styles and backgrounds.
- Create, format and make use of charts, graphs and tables.
- Insert, format and edit Smart Art, pictures and clipart.
- Incorporate sound, video and animation into a presentation.
- Create macro enabled presentations.
- Utilize the quick access toolbar and the slide master.

COM: 1

Month – 3

Personal Computer

- Components System Unit Components
- Storage Devices
- Personal Computer Connection Methods
- Operating Systems

Motherboard

- Motherboard removal and replacement
- Troubleshooting the motherboard.
- Identify motherboard component.
- Motherboard installation process.
- Motherboard removal and replacement.
- Troubleshoot computer mother Board.
- Maintain and Troubleshoot IC section.
- Troubleshoot common problem of mother board.

RAM

- Random Access Memory Defined
- Physical Memory Packaging
- Types of Memory
- Read-only Memory
- Common Memory Problems
- Managing memory
- Identify & troubleshooting common memory related problem.

CPU

- Physical CPU Types
- Processor Levels
- CPU Sockets and slots
- Install and Configure CPUs
- Install and Configure CPUs
- Common CPUs problem
- CPUs over heat troubleshooting

Hard Disk

- Identify hard disk type
- Install and configure hard disk devices
- Diagnostics and troubleshooting hard disk.
- Identify hard disk boot error.
- Diagnostics and troubleshooting common HDD related error.

Computer Power Supply (SMPS)

- Electrical environmental safety and materials handling
- Perform preventative maintenance
- Power management
- Troubleshooting the power supply
- SMPS general maintenance
- Install and configure power supplies
- Power problems

UPS

- Power management of UPS
- Troubleshooting & general maintenance of UPS

Computer assembling

- General trick of PC assembling
- System board defined
- System board evolution
- Motherboard removal and replacement
- Troubleshooting the motherboard

Month - 4)

BIOS

- Basic input output system concept
- General configure of BIOS
  System board different ports & slots identify
- Different type of cable identifies.
- General error handling of ports, slots, cables

OS

- Short brief of operating system
- Understanding of 32 bit & 64 bit OS
- Different type of OS in windows
- Different type of OS in Linux.
- Benefit of using windows and linux OS

Installation media setup

- Prepare windows bootable media
- Concept of ISO file & how to use

Hard disk Partition concept

- Hard drive partition management.
- General troubleshooting for partition error.
- Assembling of laptop.
- Replacing process of laptop accessories

Windows installation

- Installing process of windows

- Tricks of windows installation
- General error handling of installation process.

Windows driver

- Concept of windows driver
- Working principal of driver
- Identify proper device diver
- Common problem for driver and how to fix

Month – 5

Software installation & configuration

- Microsoft office 2007,2010,2013,2016 etc. (32 & 64 bit)
- Media player (32 & 64 bit)
- Adobe reader (32 & 64 bit)
- Photoshop & Illustrator (32 & 64 bit)
- AutoCAD (32 & 64 bit)
- Other software

Windows security & firewall

- Security fundamentals
- Security protection measures
- Data and physical security
- Windows firewall

Internet

- Internet technologies & network concepts
- Network connections
- Install and configure web browsers maintain.
- Troubleshooting internet connectection error.

Mother board repair& servicing

- Maintain and troubleshoot IC section
- Troubleshoot common problem of mother board
- General cleaning of motherboard.

Network sharing concept

- Sharing process with cross connection
- General file share.
- Configure share security.

Printer & scanner

- Printer and scanner components
- Printer and scanner processes of installation.
- Network printer installation
- Printer & Scanner share process.

Printer toner refill and general maintenance

Laptop Servicing

- Assembling of laptop.
- De Assembling of laptop.
- Replacing process of laptop accessories.
- General Cleaning of laptop.

Month – 6

Net working CCNA

Introducing networking

- Networking terminology
- Network categories
- Standard network models
- Physical network topologies
- Logical network topologies
- Network connectivity devices
- Ethernet networks
- Wireless networks

OSI &TCP/IP model

- The OSI model
- The TCP/IP model
- The TCP/IP protocol suite

IP addressing

- Default IP addressing schemes
- Create custom IP addressing schemes
- Assign IP addresses
- Domain naming services
- TCP/IP commands
- Common TCP/IP protocols
- TCP/IP interoperability services

Sub Netting

- IPV4 sub netting concept.
- Class – “C” sub netting.
- Class – “B” sub netting.
- Class – “A” Sub-netting.
- Sub netting practice

Introducing IOS

- The IOS User Interface
- Command-line interface (CLI)
- Router and switch administrative configurations
- Router interfaces
- Viewing, saving and erasing configurations

Month - 7

Networking CCNA

Routing basics

- The IP routing process
- Configuring IP routing in our network
- Dynamic routing
- Distance-Vector Routing Protocols

Cisco security process

- Port security
- Password security

- Console security
- Terminal security

Remote access concept

- Configure telnet & SSH
- Practice of telnet & SSH

Routing Information Protocol (RIP)

- Verifying your configurations
- Troubleshooting RIP related problem.
- RIP practice lab

Switching

- Enable static routing
- Implement dynamic IP routing
- Virtual LANs

Open Shortest Path First (OSPF) Basics

- Rules of OSPF
- Configuring OSPF
- Verifying OSPF Configuration
- OSPF DR and BDR Elections
- Troubleshooting OSPF related problem.
- OSPF practice lab

EIGRP Features and Operation

- Configuring EIGRP
- Load Balancing with EIGRP
- Verifying EIGRP
- Troubleshooting EIGRP related problem.
- EIGRP practice lab

Practice of OSPF & EIGRP

- The Router Boot Sequence
- Using Cisco Discovery Protocol (CDP)
- Configuring EIGRP and OSPF Summary Routes
- Concept of Layer 2 Switching
- Spanning Tree Protocol (STP)

Month - 8

Networking CCNA

VLAN Basics

- Concept of VLAN
- VLAN Membership
- Identifying VLANs
- Benefit of using VLAN
- VLAN Trunk king Protocols (VTP)

- Routing between VLANs

- Configuring VLANs for VTP

- VTP & DTP concept
- Configuring VTP
- Per vlan Spanning Tree Protocol (PVSTP)
- PVSTP configure

Access control List
- Introduction to Access Lists
- Standard Access Lists
- Standard Access Lists Configure
- Standard Access Lists Troubleshooting

Extended Access Lists
- Introduction to Extended Access Lists
- Extended Access Lists Configure
- Extended Access Lists troubleshooting

NAT
- Introduction to NAT
- When Do We Use NAT?
- Type of Network Address Translation
- How NAT Works
- Testing and Troubleshooting NAT

PAT
- Introduction to PAT
- When Do We Use PAT?
- How PAT Works
- Testing and Troubleshooting PAT

IPv6
- Why Do We Need IPv6?
- The Benefits and Uses of IPv6
- IPv6 Addressing and Expressions

PPP&VPN
- Point-to-Point Protocol (PPP)
- Virtual Private Networks

Month -9

General router setup & Configuration
- Concept of non-manageable router
- Setup of non-manageable router
- Configuring non-manageable router
- Configure WAN connection.
- Establish Internet connection for home & office
- Backup & restore of non-manageable router

Windows server 2016
- Concept of windows server
- Installation of Windows server

- Concept & Configure Active Directory
- Configure DNS, DHCP, File & Print Server

Mikrotik router basic

- Concept of Mikro Tik router
- Installing Mikro Tik Router
- Basic Configure Mikro Tik router

Month – 10 to 12

- Industrial attachment training / Industrial practice.

DISA Institute of Science and Technology (DIST)

Syllabus for

Computer: Group- B: MS office, Graphic design and Outsourcing.

Month # 01

Basic application of MS office

- *Introduction of a computer system and history.*
- *Knowledge about computer technology.*
- *Operation of computer system.*
- *Occupational safety and health (OSH).*
- *Knowledge on computer software.*
- *Knowledge on computer hardwire.*

❖ **MS Word**

- *Introduction on MS Word.*
- *Create a new document.*
- *Edit and format text.*
- *Change the page layout, background and borders.*
- *Insert headers and footers.*
- *Insert and edit tables.*
- *Insert clip art and pictures to documents.*
- *Perform a mail merge.*
- *Share and review shared document files.*

❖ **MS Excel**

- *Getting Started with Excel.*
- *Opening a Blank or New Workbook, General Organization.*
- *Highlights and Main Functions: Home, Insert, Page Layout, Formulas.*
- *Highlights and Main Functions: Data, Review, View, Add-Ins.*
- *Using the Excel Help Function.*
- *Working With Entering, Editing, Copy, Cut & Paste.*
- *Saving, Page Setup, and Printing.*
- *Basic Formulas and Use of Functions.*
- *Managing, Inserting, and Copying Worksheets.*
- *Securing the Excel Document (Protect Cells and Workbook).*

Month # 02

❖ **MS PowerPoint**

- *Introduction on MS Power Point.*
- *Demonstrate understanding of the terminology and elements of presentations.*
- *Distinguish between the different options available for creating a presentation.*
- *Utilize the basics of a slide show including goals and effectiveness of a presentation.*
- *Create and manipulate text and text boxes using available tools and features.*
- *Employ the use of themes, styles and backgrounds.*
- *Create, format and make use of charts, graphs and tables.*
- *Insert, format and edit Smart Art, pictures and clipart.*

- *Incorporate sound, video and animation into a presentation.*
- *Create macro enabled presentations.*
- *Utilize the quick access toolbar and the slide master.*

Month # 03

Adobe Photoshop

Selection Part

- **The marquee tools**
  - *make rectangular,*
  - *elliptical,*
  - *Single row, and single column selections.*
- **The Move tool**
  - *moves selections,*
  - *layers,*
  - *Guides.*
- **The lasso tools**
  - *make freehand,*
  - *polygonal (straight-edged),*
  - *Magnetic (snap-to) selections.*
- **The Quick Selection tool**
  - *The Quick Selection tool*
  - **The Magic Wand tool**

Crop and slice Part

- **The Crop tool**
- **The Slice tool**
- **The Slice Select tool**

Retouching Part

- **The Spot Healing Brush tool**
  - **The Spot Healing Brush tool**
  - **The Healing Brush tool**
  - **The Patch tool**
  - **The Red Eye tool**
- **The Clone Stamp tool**
  - **The Clone Stamp tool**
  - **The Pattern Stamp tool**
  - **The Eraser tool**
  - **The Background Eraser tool**
- **The Magic Eraser tool**

Month # 04

- **The Magic Eraser tool**
- **The Blur tool**
- **The Sharpen tool**
- **The Smudge tool**

- **The Dodge tool**
  - **The Dodge tool**
  - **The Burn tool**
  - **The Sponge tool**

Painting Part

- **The Brush tool** *paints brush strokes.*
  - **The Brush tool**
  - **The Pencil tool**
  - **The Color Replacement tool**
  - **The Mixer Brush tool**
- **The History Brush tool**
  - **The History Brush tool**
  - **The Art History Brush tool**
  - **The gradient tools**
  - **The Paint Bucket tool**

Drawing and Typing Part

- **The path selection tools**
  - **The path selection tools**
  - **The type tools**
  - **The type mask tools**
  - **The pen tools**
- **The shape tools and Line tool**
  - **The shape tools and Line tool**
  - **The Custom Shape tool**

Navigation, notes and measuring Part

- **The Hand tool**
  - **The Hand tool**
  - **The Rotate View tool**
  - **The Zoom tool**
  - **The Note tool**

- **The Eyedropper tool**
  - **The Eyedropper tool**
  - **The Color Sampler tool**
  - **The Ruler tool**
  - **The Count tool**

3D Part

- **The 3D Object Rotate tool**
  - **The 3D Object Rotate tool**
  - **The 3D Object Roll**
  - **The 3D Object Pan tool**
  - **The 3D Object Slide tool**
- **The 3D Object Scale tool**
  - **The 3D Object Scale tool**
  - **The 3D Rotate Camera tool**
  - **The 3D Roll Camera tool**
  - **The 3D Pan Camera tool**
- **The 3D Walk Camera tool**
  - **The 3D Walk Camera tool**
  - **The 3D Zoom Camera tool**

Month # 05

Adobe Illustrator

Selection Part

- **The Selection tool (V)**
- **The Direct Selection tool (A)**
- **The Group Selection tool**
- **The Magic Wand tool (Y)**
- **The Lasso tool (Q)**
- **The Art board tool**

Drawing Part

- **The Pen tool (P)**
  - **The Pen tool (P)**
  - **The Add Anchor Point tool (+)**
  - **The Delete Anchor Point tool (-)**
  - **The Convert Anchor Point tool (Shift +C)**
  - **The Line Segment tool (\)**
  - **The Arc tool draws individual concave**
  - **The Spiral tool**
  - **The Rectangular Grid tool**
  - **The Polar Grid tool**
  - **The Rectangle tool (M)**
  - **The Rounded Rectangle tool**
  - **The Ellipse tool (L)**
- **The Polygon tool**
  - **The Polygon tool**
  - **The Star tool**
  - **The Flare tool**
  - **The Pencil tool (N)**
- **The Smooth tool**
  - **The Smooth tool**

- **The Path Eraser tool**
- **The Perspective Grid**
- **The Perspective Selection tool**

Month # 06

Typing Part

- **The Type tools**
  - **The Type tool (T)**
  - **The Area Type tool**
  - **The Type On A Path tool**
  - **The Vertical Type tool**
  - **The Vertical Area Type tool**
  - **The Vertical Type On A Path tool**

Painting Part

- **The Paint brush tool**
  - **The Paintbrush tool (B)**
  - **The Mesh tool (U)**
  - **The Gradient tool (G)**
  - **The Eyedropper tool (I)**
- **The Live Paint Bucket tool (K)**
  - **The Live Paint Bucket tool (K)**
  - **The Live Paint Selection (Shift-L) tool**
  - **The Measure tool**
  - **The Blob Brush tool (Shift-B)**

Month # 07

Reshaping Part

- **The Rotate tool (R)**
  - **The Rotate tool (R)**
  - **The Reflect tool (O)**
  - **The Scale tool (S)**
  - **The Shear tool**
  - **The Reshape tool**
  - **The Free Transform tool (E)**
  - **The Blend tool (W)**
  - **The Width tool (Shift +W)**
  - **The Warp tool (Shift +R)**
  - **The Twirl tool**
  - **The Pucker tool**
  - **The Bloat tool**

- **The Scallop tool**
- **The Crystallize tool**
- **The Wrinkle tool**
- **The Shape Builder tool**
- **The Puppet Warp tool**

Slicing and Cutting Part

- **The Slice tool**
  - **The Slice tool**
  - **The Slice Selection tool (Shift-K)**
  - **The Eraser tool (Shift-E)**
  - **The Scissors tool (C)**
  - **The Knife tool**

Month # 08

Symbolism Part

- **The Symbol Sprayer tool (Shift +S)**
- **The Symbol Sprayer tool (Shift +S)**
- **The Symbol Shifter tool**
- **The Symbol Scrunched tool**
- **The Symbol Size tool**
- **The Symbol Spinner tool**
- **The Symbol Steiner tool**
- **The Symbol Screener tool**
- **The Symbol Style tool**

Graph Part

- **The Column Graph tools**
  - **The Column Graph tool (J)**
  - **The Stacked Column Graph tool**
  - **The Bar Graph tool**
  - **The Stacked Bar Graph tool**
  - **The Line Graph tool**
  - **The Area Graph tool**
  - **The Scatter Graph tool**
  - **The Pie Graph tool**
  - **The Radar Graph tool**

Moving and Zooming Part

- **The Hand tools**
  - **The Hand tool (H)**

- **The Print Tiling tool**
- **The Zoom tool (Z)**

Month # 09

- **Outsourcing**
  - ✓ **99designs.com**
    - **account open technique**
    - **file submitting**
    - **rating strategy**
  - ✓ **upwork.com**
    - **account open technique**
    - **profile complete**
    - **exam technique**
    - **bit strategy**
    - **earning job**

Month # 10- 12

Industrial attachment / Industrial practice

DISA Institute of Science and Technology (DIST)

Syllabus for

Computer: Group- C: MS Office, Website design & development and Outsourcing.

Month # 01

Basic application of MS office

- Introduction of a computer system and history.
- Knowledge about computer technology.
- Operation of Computer System.
- Occupational safety and health (OSH).
- Knowledge on computer software.
- Knowledge on computer hardwire.

❖ **MS Word**

- Introduction on MS Word.
- Create a new document.
- Edit and format text.
- Change the page layout, background and borders.
- Insert headers and footers.
- Insert and edit tables.
- Insert clip art and pictures to documents.
- Perform a mail merge.
- Share and review shared document files.

❖ **MS Excel**

- Getting Started with Excel.
- Opening a Blank or New Workbook, General Organization.
- Highlights and Main Functions: Home, Insert, Page Layout, Formulas.
- Highlights and Main Functions: Data, Review, View, Add-Ins.
- Using the Excel Help Function.
- Working With Entering, Editing, Copy, Cut & Paste.
- Saving, Page Setup, and Printing.
- Basic Formulas and Use of Functions.
- Managing, Inserting, and Copying Worksheets.
- Securing the Excel Document (Protect Cells and Workbook).

Month # 02

❖ **MS PowerPoint**

- Introduction on MS Power Point.
- Demonstrate understanding of the terminology and elements of presentations.
- Distinguish between the different options available for creating a presentation.
- Utilize the basics of a slide show including goals and effectiveness of a presentation.
- Create and manipulate text and text boxes using available tools and features.
- Employ the use of themes, styles and backgrounds.
- Create, format and make use of charts, graphs and tables.

- Insert, format and edit Smart Art, pictures and clipart.
- Incorporate sound, video and animation into a presentation.
- Create macro enabled presentations.
- Utilize the quick access toolbar and the slide master.

Month # 03

- Basic Concept of website.
- Difference Between Dynamic & Static Website
- What is HTML
- What is HTML5
- Website Design Tools.
- Discuss About Our Course Module.
- Important Web Browser.
- HTML extension.

Month # 04

- HTML Syntax.
- CSS Basic.
- HTML & CSS based layout
- Layout strategy
- Responsive Layout Design
- Introduction to CSS Frameworks
- Introduction to Bootstrap

Month # 05

- Responsive Design Concept discussion
- Device Responsive discussion
- Mobile Responsive Design
- Bootstrap Website Design
- Template Download strategy

Month # 06

- Template Customization Strategy
- Static Website Live Project
- Project Judgment
- Dynamic website concept design discussion
- Database introducing
- Database backup , download and upload strategy
- Admin panel design and Relate with database

Month # 07

- Educational Website live project

Project Judgment
- ❖ Blog Website Live Projects
  Project Judgment

Month # 08

- ❖ Corporate website live project
  Project Judgment
- ❖ Ecommerce Website Live project
  Project Judgment

Month # 09

- ❖ **Outsourcing**
  - ✓ **99designs.com**
  - ➢ **account open technique**
  - ➢ **file submitting**
  - ➢ **rating strategy**
  - ✓ **upwork.com**
  - ➢ **account open technique**
  - ➢ **profile complete**
  - ➢ **exam technique**
  - ➢ **bit strategy**
  - ➢ **earning job**

Month # 10 - 12

Industrial attachment / Industrial practice

DISA Institute of Science and Technology (DIST)

COM: 5

Syllabus for

Electrical: Electrical installation and maintenance.

Month – 1

- Introduction about Electrical trade.
- Safely consideration personal & workshop safely.
- Occupational safety and health (OSH).
- Safety rules and precaution.
- Primary electric shock treatment.
- Introduction of first aid box.
- Introduction and use of Hand tools & Measuring tools and equipment.
- Knowledge about electrical conductor and insulator.
- Wires and cable joint practice.
- Soldering practice.
- Knowledge about electrical house Wiring.
- Introduction of surface and concealed wiring.
- Measurement practice – steel rule, steel tape and vernier slide caliper.
- Electrical symbols & circuit diagram.
- Bulb connection – one –two- three etc.
- Basic electrical theory,
- Structure of atom.
- Electricity AC & DC.
- Electrical current, voltage, resistance and power.
- Single phase and three phase circuit.
- Mathematical calculation of ohm's and kerchief's laws.
- Build connection :
- Series circuit, parallel circuit and series and parallel combined circuits.
- Bulb connection practice by application of series parallel and combined circuits.
- Bulb connection, one – two-three more in series, parallel and combined circuits.

Month – 2

- Connection of 5 and 15 ampere socket connection.
- Connection of Table and pedestal fan.
- Connection of calling bell.
- Circuit breaker connection.
- Circuit breaker connection using 15 Ampere socket and switch.
- Various circuit breaker connections.
- Connection of tube light.

- Knowledge and skills about PVC trucking wiring, Batten wiring & channel wiring.
- Electrical House wiring plan interpreting.
- Knowledge and skills about surface conduit wiring and concealed conduit wiring.
- Knowledge and skill about electrical measuring unit such as AVO meter (Analog & digital, clamp meter) (Analog & digital, Volt meter, Ampere meter).
- Knowledge about measuring power and energy.
- Uses of energy meter.
- Knowledge and skills of meager for insulation resistance test.
- Knowledge and skills of single and three face motor.
- Connection of single & three phase motor, push bottom switch, magnetic starter, reverse forward switch, auto star delta starter.
- Magnet and magnetism.
- Change over switch.
- Universal motor, Capacitor start motor, start and run.
- Motor connection practice.

ET: 1

Month – 3

- Connection of Hand drill and Hand grinding machine shaded pole motor, electric iron, Auto light controller.
- Connection of three phases three wire meter and three phase four wire Electric meter.
- Knowledge and skills of A.C generator.
- Connection of Battery.
- Connection solar cell system.
- Knowledge and skills about transmission and distribution system (over head line).
- Electrical installation and maintenance system.
- Measurement practice – Micrometer (0 - 25mm).
- Introduction of motor winding and rewinding.
- Uses of motor winding devices.
- Application of fiber and cotton tape.
- Motor re-winding of single phase induction motor.
- Date sheet of single and three phase motor.
- Principle of single and three phase motor winding, winding basket, chain and diamond winding.
- Uses of winding forma round forma & step forma.
- Uses of super enamel wire (0.05mm - 2.99 mm)
- Motor opening and fitting practice.
- Split phase motor winding and connecting practice.
- Connection of running coil starting coil and centrifugal switch connection.
- Different types of capacitor and capacitor start motor.
- Capacitor motor start, run, connection field coil re-winding.

Month – 4

- Ceiling fan and regulator re-winding practice.
- Table fan pedestal fan and blower fan re-winding and switch connection practice.
- Shaded pole and universal motor rewinding practice.

- Introduction of transformer.
- Transformer re-winding practice.
- Two phase and two speed motor connection according to the diagram.
- Three phase induction motor knowledge date sheet preparation, opening and cleaning, insulating and re-winding practice.
- Three phase motor back side taping, connecting & ball testing.
- Three phase motor lead side taping, end plate fitting switch connection and final testing of RPM load mathematical calculation of power voltage and current.
- Electrical motor burnishing and maintenance system.
- Maintenance of electrical House hold appliance such as electric iron, voltage sta micro oven, electric kettle.

ET: 2

- Introduction of industrial electricity.
- Introduction of Direct –on-line starter and starter and electric connection.
- Earth connection.
- Knowledge and skills of magnetic starter.
- Magnetic sorter (DOL CKT and jogging connection).
- Reverse forward Ckt connection manual & automatic.
- Auto star Delta starter connection.
- Knowledge and skills of over load relay & timer.
- PDB and Generator connection by changeover switch, use of limit switch, Float switch, Micro switch and its connection with motor starter.

Month – 5

- Control of water pump by limit switch.
- Traffic/ road signal light control CKT connection.
- Reverse forward and inch CKT connection.
- Automatic PDB and generator line change over circuit connection.
- Illumination system.
- Different machine control CKT connection.
- Over load, relay, timer, circuit breaker etc connection practice.
- Introduction of AC transmission and distribution system.
- High tension (HT) switches gear.
- Transformer (HT & LT).
- LT panel board and distribution system.
- Earthling system.
- Electrical installation and maintenance system.
- General principle of AC generator.
- Single phase and three phase generator.
- Generator operation and maintenance system.
- Safely precaution for generator.
- Single phase and three phases KWH meter connection.
- Lead acid battery testing and connection.
- Basic electronics.
- Basis Hand and measuring tools of electronics.
- Soldering system.

- Application of basic electronics components such as resistor, capacitor, diode, transistor, inductor.
- Color code of the component.

Month – 6

- Soldering practice on single/solid core wire, multi core wire and copper strip board.
- Power supply circuit constriction.
- Multi vibrator circuit construction.
- Connection of: Amp meter, volt meter, single phase energy meter, three phase energy meter.
- Application of AVO meter, Ampere meter, Volt meter, Clip- on- meter (analogue & digital) & Meager (insulation tester).
- Interoperate drawing of AC Tran's mission and distribution system.
- Introduction of HT switch gear, HT meter, Transformer, LT panel board, Switch Different types of CKT breaker.

ET: 3

- Automatic/ manual PEI plant (200 KVAR)
- Introduction of Drop out fuse, lighting arrester G, 11 KV insulators & 32 KV insulators.
- Over head lines different useful tools: Bolt cutting tools (USA), Cable hoist, Compression tools, wire strip/guy grip (Pulling grips), Chain hoist, and Body belt.
- Introduction of over head line and under ground line.
- Insulator fitting system: Suspension insulator, pin insulator, Shaklee insulator etc.
- Earthling and earthling testing by meager.
- Over head line electrical symbol.
- Over head and under ground line cables.
- Over head line electrical drawing practice.
- Consolation of transformer : winding, Core, Tank, Conservator, Breather, Oil & Bushing.
- Main over head material : Line support, Insulator and conductor etc.
- Service Connection : Drop out fuse connection practice & lighting arrester connection practice.
- X-former connection practice.
- Guy connection practice.
- Fitting of insulator.
- H, T. Line wire fitting.
- Different types of spear parts fitting.

Month – 7

- Use of under ground cables, over head cables.
- Continuous current rating of under ground cable.
- Law of underground cable fitting.
- Direct laying system.
- Duct laying system.
- H. T Cable joint.
- 11 KV outdoor terminal box connections.
- Heat shrinkable joint.
- Project work – 1
- Control one bulb by one switch.

- A three pin socket control by one switch.
- Complete a house wiring system of a House.
- Project - 2
- To fitting a tube light holder complete.
- House wiring practice of a house bedroom. Dining room and drawing room.
- Project – 3.
- Selling fan selling and maintenance.
- A selling fan control by switch and regulator.
- A power circuit control by double pole switch.

Month – 8

- Project - 4
- A two bed room, dining room and kitchen room house wiring system.
- A hotel have 6 rooms and a mini lodge house wiring..
- Wiring of a balcony and corridor.

ET: 4

- Project - 5
- A non Automatic electric iron heating coil testing and replace.
- Maintenance of Automatic Electric iron.
- Servicing and maintenance of water heater/ gazer.
- Project - 6
- Table fan servicing & maintenance.
- Food mixture machine servicing & maintenance.
- Electrical kettle servicing and maintenance.
- Project - 7
- Micro oven servicing and maintenance.

Month – 9

- Project - 8
- UPS servicing and maintenance.
- IPS servicing and maintenance.
- Review of the whole course.
- Examination preparation.
- Examination
- Project review practice.
- Result out.
- Certificate distribution.

Month - 10 to 12

- Industrial attachment / Industrial practice.

DISA Institute of Science and Technology (DIST)

ET: 5

Syllabus for

Refrigeration and Air conditioning

Month - 1

- Introduction to refrigeration and air- conditioning Trade.
- Occupational Health and Safety (OHS) practice.
- Definitions and unit of heat, temperature & pressure.
- Identification of different refrigeration equipment available in RAC shop.
- List of special cooling equipment.
- Identification of common hand tools, measuring, tools, special tools and measuring tools.
- Material used in refrigeration and air conditioning works.
- Application of hand and measuring tools used in RAC works.
- Measurement practice – measuring diameter, thickness, length, area, and volume in SI and metric system.
- Demonstration on the operation of refrigeration cycle.
- Introduction to refrigeration piping and fittings, identity with appropriate measurement, identify water line fittings.

Month – 2

- Introduction to copper tube cutting, bending, flaring swaging, welding and brazing.
- Welding and brazing practice on copper and copper, copper and steel and steel and steel.
- Hard soldering practice,
- Pressure measurement practice.
- Knowledge and skills of compound gauge, high pressure gauge, double gauge manifold.
- Use and care of charging hoses.
- Knowledge and skill of analog and digital AVO meter, ampere meter and multi-meter.
- Definition of electricity, current, voltage and resistance.
- Explanation of Ohm’s Law.
- Source of electric current.
- Use of voltage stabilizer, volt guard.
- Measurement practice of voltage, current and resistance.
- Knowledge and skill of Electrical House Wiring.
- Use of series board for continuity, resistance and grounding.
- Electrical fitting required in refrigeration and air conditioning work.
- Specification of electrical fittings.
- Knowledge and skills on single and three phase power supply system.
- Introduction to electrical circuit, series Ckt, parallel Ckt, series and parallel circuit’s connection practice.

- Effect of series and parallel circuit.
- Measurement of voltage drops on each resistance.

Month-3

RC: 1

- Knowledge and skills of single phase Motor.
- Identify different types of Motors.
- Knowledge and skills of three phase Motors.
- Starting method of Motors.
- Terminal identification of compressor Motor.
- Motor starting without relay and capacitor, starting with rely & capacitor.
- Start a 3 phases Motor with starter and circuit breaker.
- Start a 3 phases Motor in reverse and forward motion.
- Star and delta connection of 3 phases Motor.
- Transformer checks resistance, continuity ground voltage input and out put.
- Compressor dome cutting, identification of interior parts, identification of faults, remedies and setting the dome for welding & charging oil, checking pumping and motor conditions.

Month- 4

- Identify different types of relay, test/check relay, OLP, Capacitor, Thermostat, Pressure cutout
- Knowledge and skills on magnetic conductor.
- Electrical wiring practice on frosted refrigerator/freezer on the table.
- Check wiring of frosted type domestic refrigerator/freezer, starting the refrigerator freezer.
- Check Ampere and cooling.
- Electrical wiring of auto defrosts refrigerator/freezer on the table, testing for the operation.
- Check the wiring of defrosted type refrigerator/freezer.
- Identify the electrical components used in non frost refrigerator/freezer, check its proper function, check timer, defrost thermostat, thermal fuse lamp & fan switch and other components, and connect all components for operation.

Month- 5

- Knowledge and skills on the function of timer, heater defrosts. Thermostat, fan and lamp-fan switch, thermostat etc.
- Check wiring of the chest type freezer, disconnect all wiring and reconnect it.
- Check and inspects if any mistake.
- Operate for cooling.
- Check wiring of a water cooler.
- Operate for water cooler proper function and fault finding.
- Check cooling and automatic operation.
- Factors to be considered for installation and operation.
- Knowledge and skills of different types of water cooler.

Month- 6

- Knowledge and skills of beverage cooler, Check compressor motor, fan motor operate for cooling, operate for automatic operation.
- Check upright freezer for its function.
- Test leak in a refrigerator/freezer, repair leak if any.

- Evacuate and charge appropriate refrigerant.
- Knowledge and skills of refrigerant, Types of refrigerant, CFC, HCFC, HFC,HC and HC blend.
- Refrigerant handing procedure.
- Introduction of window type Air Conditioner.
- Identify the electrical components of a window type Air Conditioner.
- Check and connect the entire component, check selector switch, fan motor, compressor motor reconnect and operate.
- Operate window cooler for operation.
- Check the effect of voltage, cooling and correct operation, and test for Thermostat, change refrigerant.

RC: 2

Month- 7

- Knowledge and skills of split type air-conditioner.
- Check refrigerant in the split type air-conditioner. Charge refrigerant of part charge required, check leak if empty, evacuate if full charge required then charge refrigerant.
- Introduction to different types of air-conditioner.
- Advantages and dis-advantages of split type over package type,
- Advantages and dis-advantages over window type.
- Knowledge and skill of the water chiller.
- Identify component of water chiller, operate for its function, check for its performance, Service the condenser & others components Check wiring.

Month- 8

- Perform gas welding.
- Repair and maintenance of compressor.
- Service and repair of refrigerator.
- Service and maintenance of Deep freezer
- Service and maintenance of window type air-conditioner.

Month- 9

- Knowledge of central air-conditioner.
- Visit of a central air-conditioner plant.
- Service and maintenance of split air-conditioner.
- Service and maintenance of ice cream maker.
- Service and maintenance of washing machine.
- Service and maintenance of water cooler.

Month- 10 to12

- Industrial attachment training / Industrial practice.

DISA Institute of Science and Technology (DIST)

RC: 3

Syllabus for

Motorcycle repair & servicing:

Month - 1

- Introduction about Motor Cycle Trade
- Introduction of occupational safety and health (OSH) in Motorcycle servicing and repairing in the work place.
- Introduction of hand measuring and equipment
- Identity tools and spares parts for Motorcycle servicing & repairing.
- Application of hand and measuring tools.
- Mattel cutting practice by hack saw & chisel
- Filling practice by metal cutting file.
- Measuring practice of steel Tape, Steel rule, vernier caliper and micrometer.
- Use of boar gauge, screw pitches gauge, filler gauge and tales copping gauge.
- Use of Avo-meter.
- Introduction of basic electrical and electronics.
- Knowledge about electrical conductor and insulator.
- Electrical wires and cable joint practice.
- Knowledge of electrical current, voltage, resistance and power.
- Electricity AC and DC.
- Electrical symbols & circuit diagram.
- Electrical wiring practice.
- Application of basic electronics component such as resistor capacitors, diode, transistor, inductor etc.
- Soldering practice.
- Color code of the component.

Month - 2

- Use of Motorcycle fasteners
- Identification of motorcycle system.
- Body system, Chassis system, Engine system, Fuel system, Cooling system, Lubricating system, Brake system, Suspension system, Steering system, Power transmission system, Electrical and electronics system and Wheel and Tire system.
- Soldering practice on single/solid core wire, multi core wire and copper strip board.
- Power supply circuit construction.
- Cooling bell circuit construction.
- Knowledge and skills of “change wheels and tires.”
- Details demonstration on body system.
- Knowledge and skills of chassis system.

Month - 3

- Service motorcycle engine system.

- Identify different types of engine: Construction of 2 & 4 stroke engine, Demonstrated to identify engine component 2 &4 stroke, Difference between 2 & 4 stroke engine & operation of 2 & 4 stroke cycle.
- Perform engine servicing: Change engine oil and filter, clean/ change air filter, e level, checks in different models, adjust valve clearance (tappets) and to adjustn chain.

MS: 1

- Finding T.D.C and B.D.C valve timing practice
- Tappet clearance and measurement practice.
- Use of service manual.
- Knowledge and skills of petrol fuel system.
- Carbonator parts identification and function.
- Different circuit of carbonator venture of carbonator, air fuel ratio, carbonator float, slow running adjusts practice and fuel system servicing.

Month - 4

- Change Motorcycle wheels and tires.
- Prepare for change wheels and tires.
- Identified materials, tools and replacement parts as required.
- Remove wheel assembly for inspection: Use service manual, remove wheels and associated components.
- Service alloy rim/replace spokes tires and tube.
- Re-assemble wheel assembly.
- Tube vulcanizing practice.
- Wheel balancing practice
- Replace Motorcycle seats, gaskets and bearing
- Inspect seals and gaskets: Valve cover gasket, Transmission selector seals.
- Replace seals and gasket: Oil filter and housing gaskets, sum plug gasket, clutch and engine side cover gasket,
- Replace bearing: Wheel and hub bearing, steering head bearing& swing arm bearing/bush.
- Replacement parts and materials: Paper type gasket/sealants, grease, brake fluid, hydraulic oil and lubricants.
- Service motorcycle cooling system.
- Inspect and service cooling system.
- Component of cooling system and their function
- Cooling system servicing.
- Service Motorcycle lubricating system.
- Types of lubricating system.
- Component of lubricating system and their function.
- Types of lubricating system and their function.
- Fault finding and repair.

Month - 5

- Servicing of motorcycle transmission system.
- Inspect transmission system of motorcycle: Types of clutch, class disassemble and re-assemble and servicing practice.
- Inspect steering and suspension system of motorcycle.

- Check wheel bearing and swing arm bush bearing, rear shock absorbers, front forks oil leakage, fork oil checked and refilled, performance of suspension system is inspected.
- Servicing of motorcycle steering system.
- Inspect Motorcycle drive system: Performance check Chain and Sprocket.
- Service Chain and Sprocket.
- Worn drive chain and sprockets are replaced.
- Dis-assemble, re-assemble and servicing practice.

MS: 2

Month - 6

- Service Motorcycle suspension system.
- Front and rear shock absorber dis-assembles and re-assembles.
- Identification and introduction of gear box component.
- Gear box dis-assemble, re-assemble and servicing.
- Drive chain and sprocket servicing and adjustment.
- Motorcycle electrical and electronics system.
- Identification of ignition system.
- Types of ignition system.
- Function of ignition system.
- Component of ignition system and their function.
- Low tension magneto ignition circuit.
- Contract backer (CB) point.
- Spark plug gap adjustment.
- CDI ignition circuit practice, faults finding and repairing.

Month - 7

- Motorcycle electrical circuit practice.
- Horn circuit and head light circuit practice.
- Indicating and break circuit practice.
- Park and hazard circuit practice.
- Motor starting and battery circuits practice.
- Motorcycle alarm.
- Maintenance and topping up practice.
- Motorcycle electrical and Electronics different devices connection practice.

Month - 8

- Different models Motorcycle servicing and repairing practice.
- Motorcycle re-assemble and assemble practice.
- Examination preparation.
- Examination.
- Project review practice.
- Result out.
- Certificate distribution.

Month - 9

- Different models motorcycle servicing and repairing practice.
- Customer's motorcycle receiving and repairing.

Month - 10 to 12

- Industrial attachment training.

DISA Institute of Science and Technology

MS: 3

Syllabus for
Spoken English Course

Month - 1

- English greetings.
- Good Morning.
- Good Evening.
- Good Afternoon.
- Good Night etc.
- Uses of greetings.
- Polite phrases & selected words to cover courtesy in English culture & uses of those words.
- To express gratefulness.
- Response to thanks.
- To draw attention of other people.
- Excuse me, impolite & polite.

Month - 2

- Conversation
- Exclamation
- Marvelous
- How sad
- How terrible
- How sweet etc
- Short form of speech
- Just coming
- O.K
- As you please
- Why not?
- Does not matter etc.

Month - 3

- Conversation
- Command & Request
- Example Stop
- Please Stop
- Conversation
- Finding new words.
- Alternative words.
- Similar Sentences.
- Review Conversation
- Conception of Tense

Month - 4

- Review Conversation.
- Change of Tense Alternatives.
- Conversation.
- Positive.
- Negative & Interrogative.
- Question Words.
- Conversation.
- Review.

Eng: 1

Month -5

- Transformation of Sentences.
- Helping Words.
- Can, Could, May, Might, Must, Should, Would etc.
- English Jokes Conversation.
- Alternative words.
- Review Conversation.
- Alternative

Month - 6

- Self-expression.
- Question/Answer.
- Free Conversation.
- Pass a Comment.
- Response of the Comment.
- Conversation.

Month - 7

- Asking Time
- Address
- Telephone Number
- Telephonic Conversation
- Review

Month - 8

- Business Matters.
- Asking Direction.
- Shopping.
- Conversation etc.
- Need Based Conversation.
- Problem Solving.
- Daily Matter.

Month - 9

- Business Letter Writing.
- CV Writing.
- Service Application Writing.
- Joining Letter Writing.
- Resignation Letter writing.
- Cash Voucher Writing.

DISA Institute of Science and Technology

Eng: 2

Syllabus for
Value Education

Month - 1

Purpose of value education

INSTRUCTIONAL OBJECTIVES

- To help individuals think about and reflect on different values.
- To deepen understanding.
- Motivation and responsibility with regard to making personal and social choices and the practical implications of expressing them in relation to themselves, & others.
- The community and the world at large.

Month - 2

- To inspire individuals to choose their-
- Own personal values
- Social values
- Moral values
- Spiritual values and
- Be aware of practical methods for developing and deepening.

Month - 3

Value Education

- Introduction
- Definition of values
- Why values?
- Need for Inculcation of values
- Object of Value Education
- Sources of Value

Types Values

- Personal values
- Social values
- Professional values
- Moral and spiritual values
- Behavioral (common) values

Month - 4

Personal values

- Definition of person
- Self confidence
- Self discipline
- Self Assessment
- Self restraint
- Self motivation
- Determination

- Ambition
- Contentment
- Humility and Simplicity
- Sympathy and Compassion
- Gratitude
- Forgiveness
- Honesty
- Courtesy

VE: 1

Month - 5

Social values

- Definition of Society
- Units of Society
- Individual, family, different groups
- Community
- Social consciousness
- Equality and Brotherhood
- Dialogue
- Broadmindedness
- Responsibility
- Co-operation Freedom
- Repentance
- Magnanimity

Month - 6

Professional values

- Definition
- Competence
- Confidence
- Devotion to duty
- Efficiency
- Accountability

Month - 7

Professional values

- Respect for learning / learned
- Willingness to learn
- Open and balanced mind
- Team spirit
- Professional Ethic
- Willingness for Discussion
- Aims
- Effort
- Avoidance of procrastination and slothfulness
- Alertness.

Month - 8

Behavioral values

- Individual values and group values
- Good manners at home and outside
- Equality
- Purity of thought, speech and action
- Understanding the role of religion

Month - 9

VE: 2

Behavioral values

- Faith
- Understanding the commonness of religions
- Respect for other faiths
- Unity diversity
- Living together
- Tolerance
- Non-violence
- Truthfulness
- Common aim
- Unified efforts towards peace
- Patriotism
- Examination

DISA Institute of Science and Technology (DIST)

VE: 3

Syllabus for

Technical Drawing

Month - 1

- **Introduction of technical drawing**
- **Lettering, Numbering & Dimensioning**
  - Draw Alphabet of lines
  - Draw capital letter
  - Draw small letter
  - Draw Block lettering
- **Free-hand drawing**
  - Describe Free- hand drawing
  - Describe rules of free-hand drawing
  - Draw free-hand different types of hand tools

Month- 2

- **Geometrical Drawing**
  - Describe Geometrical drawing
  - Draw angle circle & triangle
  - Draw square & rectangle
  - Draw hexagonal & pentagonal
  - Draw prism & pyramid
  - Draw round bar, flat bar , cube, cylinder & cone

Month - 3

- **Isometric & Orthographic views**
  - Describe views
  - Draw different view of object
  - Describe projection and scale of drawing
  - Draw view in 1st angle projection method
  - Draw view in 3rd angle projection method
  - Draw different scale of drawing
  - Describe isometric view
  - Draw isometric view

Month - 4

  - Describe orthographic view
  - Draw orthographic view
  - Describe working drawing
  - Draw working drawing on different spare parts

Month - 5

- **Surface finish designation, Tolerance, Limit & Fit**
  - Describe surface finish designation

- Apply surface finish designation on drawing
- Describe tolerance
- Describe tolerance limit & fit
- Calculate tolerance, limit and fits

TD: 1

Month - 6

- **Section Drawing**
  - Describe section drawing
  - Draw sectional drawing
  - State the rules of sectional drawing
  - Describe types of sectional drawing
  - Describe symbolic section lines
  - Draw symbolic of section lines
  - Draw different full sectional drawing
  - Draw different half sectional drawing
  - Draw revolved section
  - Draw aligned and removed section

Month - 7

- **Development Drawing**
  - Describe Development drawing
  - Describe necessity of Development drawing
  - State the rules of Development drawing
  - Explain parallel, radial, Sphere & triangulation development
  - Draw prism development
  - Draw Pyramid and cone development
  - Draw Sphere development
  - Draw Triangulation development

Month - 8

- **Assembly & Working Drawing**
  - Describe assembly & working drawing
  - State necessity of assembly & working drawing
  - Draw assembly detail drawing
  - Draw working detail drawing
  - Interoperate assembly & working drawing

Month - 9

- Electrical trade related drawing practice for electrical trade.
- Computer trade related drawing for Computer Trade.
- Refrigeration and Air Conditioning trade related drawing for RAC Trade.
- Motorcycle repair and servicing trade related drawing for Motorcycle repair and servicing Trade.
- Examination

THE END

TD: 2