

# **COPA Trade Practical (Half Year 1)**

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Dedicated to the almighty which is  
the source of all knowledge and  
skill!

## **PREFACE**

This book is the result of day to day coursework created to offer practical training to the students of Computer Operator and Programming Assistant trade.

The course work concentrates on imparting proficiency in the use of computers and strives to imbibe a sense of confidence in the trainees about their ability to face real world situations.



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**(1) AIM: Identification of externally visible computer components**

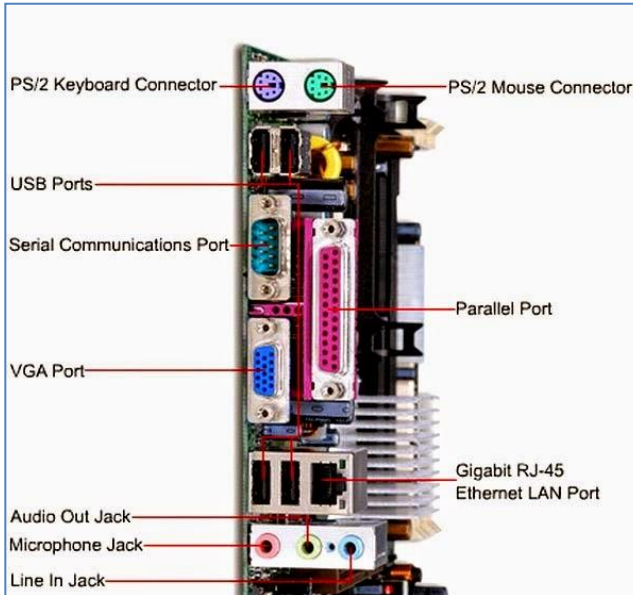
**PROCEDURE:**

- 1) Look at the computer and its macro-components.  
Identify the following components:
  - a. Central Processing Unit (CPU)
  - b. Monitor (Light Emitting Diode LED/ Liquid Crystal Display LCD/ Cathode Ray Tube CRT) – size 10”, 15.6”, 20”, etc. diagonal size.
  - c. Mouse – Left, right and centre buttons. Centre button is a roller.
  - d. Keyboard – 107 keys; US International layout.
  - e. Power button of CPU.
  - f. Reset button of CPU.
  
- 2) Look at the back panel of the Central Processing Unit.  
Identify the following components:
  - a. **Personal System/2 (PS/2) port** – for keyboard and mouse – 2 ports
  - b. **Universal Serial Bus (USB)** – version 2 or 3 (USB2 or USB3).
  - c. **Recommended Standard 232 (RS-232) or Serial Port or COM port** – for duplex communication. Previously used for mouse, MODEM, etc. It has 9 pins arranged in 2 rows (5+4 pins)
  - d. **Line Print Terminal (LPT) or Parallel Port or Centronics 36 port** – for old type printers.

- e. **Video Graphics Array (VGA) port** – for monitor; It connects to DE-15 connector. 15 pins are arranged in 3 rows of 5 pins each.

- f. **Registered Jack 45 (RJ45) or Ethernet port or**

**LAN port** – For



broadband or Local Area Network (LAN) connection.

- g. **Registered Jack 11 (RJ11)** – Similar in shape to RJ45 but smaller in size. Used for connecting telephone line or other communication lines.

- h. **Digital Visual Interface (DVI)** – Video output port for monitor.

- i. **Audio input/ output jacks** – 3 numbers

- i. **Microphone Jack (3.5mm)** - Left side port of the 3 jacks of 3.5mm size.

- ii. **Audio Output Jack (3.5mm)** – Centre port of the 3 jacks of 3.5mm size.

- iii. **Line Input Jack (3.5mm)** – Jack for input of audio signal from a device like radio.

- j. **High Definition Media Interface (HDMI) port** – for high quality video signal output for monitor, projector, etc.

- k. **Game Port** – For connecting Joystick.
- 3) Identify the following buttons in mouse:
- a. **Left button**
  - b. **Right button**
  - c. **Centre button cum scroll button**
- 4) Identify the following Special buttons on Keyboard:
- a. **Space bar** – The longest button at the bottom centre of keyboard.
  - b. **Ctrl (Control)** – Placed on both ends of keyboard.
  - c. **Alt (Meta)** – Placed on both ends of space bar.
  - d. **Shift** – Placed at both ends of keyboard. It toggles Capital letter and helps to type symbols above numbers.
  - e. **Enter** – Placed at right end of primary group and at the bottom of number lock.
  - f. **Caps lock** – Toggles capital letters on or off.
  - g. **Tab** – Inserts a tab character.
  - h. **Left, Right, Up and Down arrows** - Between primary key group and number lock.
  - i. **Insert, Delete, Home, End, Page Up & Page Down** – Placed above arrow keys.
  - j. **Print Screen, Scroll Lock & Pause/Break** – Placed at the top right of keyboard.
  - k. **Function keys F1 to F12** – 12 function keys are placed at topmost row of keyboard.
  - l. **Esc** – Placed at the top left of keyboard.
- 

## **(2) AIM: Identifying internal components of Computer**

### **Procedure:**

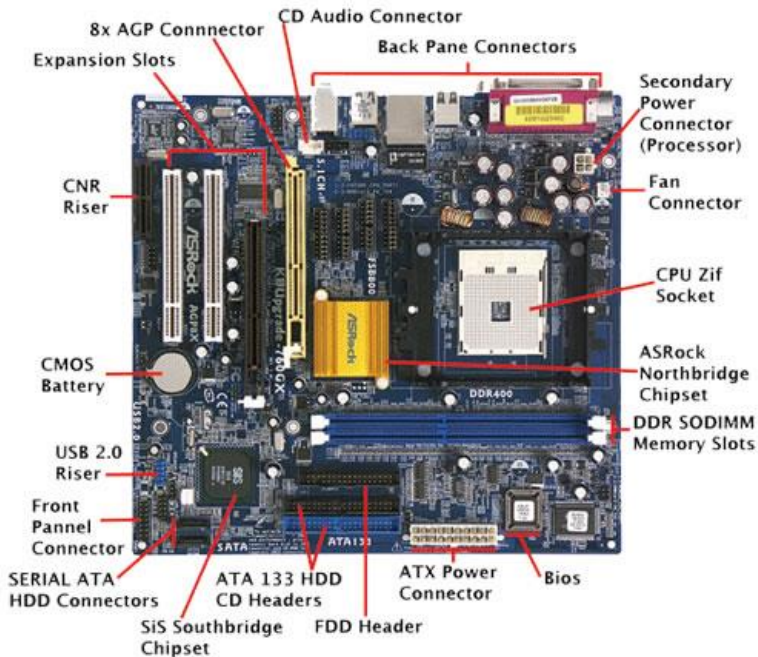
Identify the following components inside the CPU

- 1) **Hard Disk Drive:** the device used for storage of large amount of data. It is a secondary storage (Data stored in it is available even after reboot).
  
- 2) **Optical Drive/ CD Drive / DVD Drive:** Optical drive is used to read and write CD or DVD.

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- 3) **SATA:** Serial Advanced Technology Attachment.
- 4) **PATA:** Parallel Advanced Technology Attachment.
- 5) **Floppy Disk Drive:** Obsolete. It was used to read floppy disk.
- 6) **RAM:** Random Access Memory
- 7) **CMOS:** Complementary Metal Oxide Semi-Conductor memory.
- 8) **CMOS Battery:** CR2032 battery for CMOS
- 9) **Processor:** The micro-processor chip.



### (3) AIM: Connecting peripheral units and power supply to a computer

#### Procedure:

- 1) A minimum of 4 connections are needed to make the CPU to work:
    - a. **Power cable connection:** It is a three socket power cable to be connected to the Switch Mode Power Supply (SMPS) of the computer. SMPS divides the power for various components (like mother board, hard disk, DVD drive, floppy disk drive, etc.).
    - b. **Display connection:** Display from the CPU is normally connected using a VGA (Video Graphics Array) or HDMI (high Definition Media Interface) or DVI (Digital Video Interface) port. Each cable has specific position (like a long edge and short edge) to ensure right direction for connecting the ends.
    - c. **Keyboard:** Keyboard is the most essential input component. It is connected through USB (Universal Serial Bus) or PS2 (Personal System 2 – very old method) ports.
    - d. **Mouse:** Mouse may be connected through USB (Universal Serial Bus) or through Serial port/RS232 (Recommended Standard 232) port or through PS2 (Personal System 2).
  - 2) After connecting power cable, display cable, keyboard and mouse to the back panel of the CPU, power on the
- 

### (4) AIM: Opening the back lid of a laptop and identifying components

#### Procedure

- 1) Place the laptop with the bottom side up.
- 2) Identify the screws and unscrew them using appropriate screwdriver.
- 3) Keep all the removed screws in a safe location.
- 4) Gently open the back lid without applying undue force.
- 5) Identify processor, RAM, CMOS battery and hard disks.

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- 6) Remove CMOS Battery and refix the same.
- 7) Remove RAM by relaxing the knobs on both sides of the RAM and gently pulling out from the slot..
- 8) Refix the RAM at its slot by gently inserting the same in its slot. The pins lock the RAM automatically.
- 9) Remove hard disk after detaching from the SATA power and SATA data connections.
- 10) Refix the hard disk and connect the SATA power and SATA data slots.

### **(5) AIM: Identifying power output cables from Switch Mode Power Supply (SMPS)**

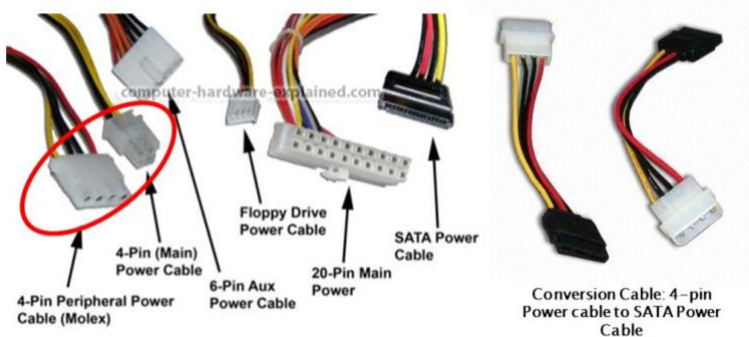
#### **Procedure:**

- 1) Open the left panel of the CPU.
- 2) Switch Mode Power Supply (SMPS) is located at the top rear. It converts Alternating Current (AC) input to Direct Current (DC) output.
- 3) SMPS output voltage may be in the range of 12V to 15V at 0.5A current.



**Switch Mode Power Supply (SMPS)**





### SMPS Power Cables

- 4) The main power connectors are:
  - a. 4 Pin peripheral power connector cable/ PATA power cable
  - b. 4 pin main power cable (connects to the motherboard)
  - c. 6 pin aux power cable (connects to the motherboard)
  - d. Floppy Drive power cable
  - e. SATA Power cable
  - f. 20 pin main power cable (connects to the motherboard)
  - g. 4 pin (PATA power) to SATA power convertors (if required)
- 5) Connect each cable to specified location. Keenly watch the pin details.

---

### (6) AIM: Connecting peripheral units to CPU

#### Procedure:

- 1) Take the following items along with the CPU:
  - a. 2 power connectors
  - b. VGA cable
  - c. Keyboard (USB or PS/2)
  - d. Mouse (USB or PS/2)
  - e. Printer, scanner, if any. (USB)
- 2) Connect the keyboard to the USB slot or PS/2 slot. Note that USB cable can be inserted only when the opening in the cable matches with the stem of the port. In case

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of PS/2, ensure that the large stem in the cable matches the large slot in the port.

- 3) Connect mouse (similar to keyboard).
- 4) Connect the VGA Cable to the back panel VGA (or HDMI) port. In case there is are 2 VGA ports, connect to the active port from Graphics memory.
- 5) Connect the other end of the VGA (or HDMI) cable to the VGA slot in the monitor.
- 6) Connect the power cable to the SMPS power port of the CPU.
- 7) Connect the other power cable to the monitor.
- 8) Connect the free ends of both power cables to a power source supported by Uninterruptible Power Supply (UPS).
- 9) Power on the UPS.
- 10) Power on the CPU and verify that the computer works.

---

### **(7) AIM: Working with MS Paint**

#### **Procedure:**

- 1) Open MS Paint. Press Windows+R. Type **mspaint** and press enter.
- 2) MS Paint is opened. Resize the canvas to suit the size of your drawing.
- 3) MS Paint contains File, Home and View menus.
- 4) To access the items contained in the File menu, click File or Press Alt+F. Following items are available under File menu:
  - a. New (Ctrl+N or Alt+F+N)
  - b. Open (Ctrl+O or Alt+F+O)
  - c. Save (Ctrl+S or Alt+F+S)
  - d. Print (Ctrl+P or Alt+F+P)
  - e. From Scanner or Camera (Alt+F+M)
  - f. Send in Email (Alt+F+D)
  - g. Set as Desktop Background (Alt+F+B)
  - h. Properties (Alt+F+E)
  - i. About Paint (Alt+F+T)
  - j. Exit (Alt+F+X)

5) Home (Alt+H) menu in MS Paint has the following items:

- a. Paste (Ctrl+V or Alt+H+V+P or Alt+H+V+F)
- b. Cut (Ctrl+X or Alt+H+X)
- c. Copy (Ctrl+C or Alt+H+C)
- d. Select (Alt+H+SE)
  - i. Rectangle selection (Alt+H+SE+R)
  - ii. Freeform selection (Alt+H+SE+F)
  - iii. Select All (Ctrl+A or Alt+H+SE+A)
  - iv. Invert selection (Alt+H+SE+I)
  - v. Transparent selection (Alt+H+SE+T)
- e. Crop (Alt+H+RP)
- f. Resize (Alt+H+RE)
- g. Rotate (Alt+H+RO)
  - i. Rotate Right 90° (Alt+H+RO+R)
  - ii. Rotate Left 90° (Alt+H+RO+L)
  - iii. Rotate 180° (Alt+H+RO+T)
  - iv. Flip Vertical (Alt+H+RO+V)
  - v. Flip Horizontal (Alt+H+RO+H)
- h. Pencil (Alt+H+P)
- i. Fill tool (Alt+H+K)
- j. Text tool (Alt+H+T)
- k. Eraser (Alt+H+ER)
- l. Color picker (Alt+H+D)
- m. Zoom (Alt+H+M)
- n. Brushes (Alt+H+B)
- o. Shapes (Alt+H+SH)
- p. Outline (Alt+H+O)
- q. Fill (Alt+H+J)
- r. Size (Alt+H+SZ)
- s. Color 1 (Alt+H+1)
- t. Color 2 (Alt+H+2)
- u. Edit Color (Alt+H+EC)

6) View menu (Alt+V) contains the following items:

- a. Zoom In (Alt+V+I)
- b. Zoom Out (Alt+V+O)
- c. Zoom 100% (Alt+V+M)

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- d. Rulers (Alt+V+R)
  - e. Gridlines (Alt+V+G)
  - f. Status bar (Alt+V+S)
  - g. Full screen (Alt+V+F)
  - h. Thumbnail (Alt+V+T)
- 7) Save your drawing using File->Save or pressing Ctrl+S or Alt+F+S.
- 

### (8) AIM: Creating text file and HTML file using Notepad

#### Procedure:

- 1) Open notepad (either press Windows+R, type **notepad**, press Enter or choose Windows->All Apps->Windows Accessories->Notepad).
- 2) Type the following content:

#### The list of my classmates at ITI is:

X  
Y

- 3) Save this file by pressing Ctrl+S. Type <your\_name>-ex-6.txt in the name box. Press Save button.
- 4) Press Ctrl+N. If Notepad displays dialog with the options Save, Don't Save or Discard, press Save button. Notepad displays blank window for new document.
- 5) Type the following content.

```
<html>  
<head>  
<title>Welcome to COPA Trade</title>  
</head>  
<body>  
<h1>Welcome to COPA Trade</h1>  
</body>  
</html>
```

- 6) Press Ctrl+S (or choose File->Save from menu). Select "All Files" against Save as type (default is Text document \*.txt). Enter <your-name>-ex-6.html in the File name box.
- 7) Press Enter key or press Save button to save the file.

- 8) Open Windows Explorer by pressing Windows+E.
- 9) Select Documents folder.
- 10) Double click the HTML document you created using notepad.
- 11) Verify whether a web browser displays welcome message.

12) Menu structure of Notepad is:

- a. File (Alt+F)
  - i. New (Ctrl+N, Alt+F+N)
  - ii. Open (Ctrl+O, Alt+F+O)
  - iii. Save (Ctrl+S, Alt+F+S)
  - iv. Save As (Alt+F+A)
  - v. Page Setup (Alt+F+U)
  - vi. Print (Ctrl+P, Alt+F+P)
  - vii. Exit
- b. Edit
  - i. Undo (Ctrl+Z)
  - ii. Cut (Ctrl+X), Copy (Ctrl+C), Paste (Ctrl+V), Delete (Del)
  - iii. Find (Ctrl+F), Find Next (F3), Replace (Ctrl+H), Go to (Ctrl+G)
  - iv. Select All (Ctrl+A)
  - v. Time (F5)
- c. Format
  - i. Wordwrap
  - ii. Font
- d. View
  - i. Status Bar (Alt+V+S)
- e. Help
  - i. View Help (Alt+H+H)
  - ii. About Notepad (Alt+H+A)

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### **(9) AIM: Typing and saving Local Language (UNICODE) text using Notepad**

**Procedure:**

- 1) Open Azhagi+ from the Desktop. Leave it running.

- 2) Open notepad (either press Windows+R, type **notepad**, press Enter or choose Windows->All Apps->Windows Accessories->Notepad).
- 3) Set the font type to any UNICODE font (Calibri, Arial Unicode MS, Latha, Nirmala, etc.).
- 4) Type Language option key (Ctrl+1 – Hindi, Alt+3 – Tamil, Ctrl+2 – Sanskrit, Ctrl+3 – Telugu, Ctrl+4 – Kannada, Ctrl+5 – Malayalam, Ctrl+6, Marathi, Ctrl+7 – Konkani, Ctrl+8 – Gujarati, Ctrl+9 – Bengali, Ctrl+0 – Punjabi, Ctrl+F11 – Oriya, Ctrl+F12 – Assamese) in the Notepad Window to toggle from English to Local Language or vice versa. Azhagi+ switches English and Local Language typing modes.
- 5) For composing Tamil text, use phonetic spelling, e.g., type thamiz for தமிழ் and type thirukkuRaL for திருக்குறள்.
- 6) Compose the following text in Tamil:

**அதிகாரம்: ஊக்கம் உடைமை**

**இயல்: அரசியல்**

**பால்: பொருட்பால்**

**உடையர் எனப்படுவது ஊக்கம் அஃதில்லார்  
உடையது உடையரோ மற்று.**

**உள்ளம் உடைமை உடைமை பொருளுடைமை  
நில்லாது நீங்கி விடும்.**

**ஆக்கம் இழந்தேமென்று அல்லாவார் ஊக்கம்  
ஒருவந்தம் கைத்துடை யார்.**

**ஆக்கம் அதர்வினாய்ச் செல்லும் அசைவிலா  
ஊக்க முடையா னுழை.**

வெள்ளத் தனைய மலர்நீட்டம் மாந்தர்தம்  
உள்ளத் தனையது உயர்வு.

உள்ளுவ தெல்லாம் உயர்வுள்ளல் மற்றது  
தள்ளினுந் தள்ளாமை நீர்த்து.

சிதைவிடத்து ஒல்கார் உரவோர் புதையம்பிற்  
பட்டுப்பா டீன்றுங் களிறு.

உள்ளம் இலாதவர் எய்தார் உலகத்து  
வள்ளியம் என்னுஞ் செருக்கு.

பரியது கூர்ங்கோட்டது ஆயினும் யானை  
வெருஉம் புலிதாக் குறின்.

உரமொருவற்கு உள்ள வெறுக்கைஅஃ  
தில்லார்  
மரம்மக்க ளாதலே வேறு.

- 7) Save this file by pressing Ctrl+S. Type <your\_name>-ex-7.txt in the name box. Set the Encoding to Unicode (otherwise, Local language characters will not be saved).
- 8) Press Save button.
- 9) Following are the phonetic shortcuts for Tamil letters.

அ - a	ஆ - aa or A	இ - i	ஈ - ii or I	உ - u	ஊ - uu or U
எ - e	ஏ - ae	ஐ - ai	ஓ - o	ஔ - oa or O	ஔ-a; ஃ-q
க - ka	கா - kaa/ kA	கி - ki	கீ - kii/ kI	கு - ku	கூ - kuu/ kU
கெ - ke	கே -	கை -	கொ -	கோ -	கௌ -

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	kae/kE	kai	ko	koa/ kO	kau
ங - nGa	ஙா - nGaa/nGA	ஙி - nGi	ஙீ - nGI	ஙு - nGu	ஙூ - nGuu/ nGU
ஙெ - nGe	ஙே - nGee/ nGE	ஙை - nGai	ஙொ - nGo	ஙோ - nGO	ஙௌ - nGau
ச - sa	சா - saa/ sA	சி - si	சீ - sii/ sI	சு - su	சூ - suu
செ - se	சே - sae/ sE	சை - sai	சொ - so	சோ - sO/ soa	சௌ - sau
ஞ - gna	ஞா - gnaa/gnA	ஞி - gni	ஞீ - gnI	ஞு - gnu	ஞூ - gnU
ஞெ - gne	ஞே - gnE	ஞை - gnai	ஞொ - gno	ஞோ - gnO	ஞௌ - gnau
ட - da/ ta	டா - dA/ aA	டி - di/ ti	டீ - dI/tI	டு - du/ tu	டூ - dU/ tU
டெ - de/te	டே - dE/ tE	டை - dai/tai	டொ - do/to	டோ - dO/tO	டௌ - dau/tau
ண - Na	ணா - Naa/ NA	ணி - Ni	ணீ - Nii/ NI	ணு - Nu	ணூ - Nuu/ NU
ணெ - Ne	ணே - Nae/ NE	ணை - Nai	ணொ - No	ணோ - NO	ணௌ - Nau
த - dha/tha	தா - thA	தி - thi	தீ - thI	து - thu	தூ - thU
தெ - the	தே - thE	தை - thai	தொ - tho	தோ - thO	தௌ - thau
ந - nha	நா - nhA	நி - nhi	நீ - nhI	நு - nhu	நூ - nhU
நெ - nhe	நே - nhE	நை - nhai	நொ - nho	நோ - nhO	நௌ - nhau
ப - pa	பா - paa	பி - pi	பீ - pl	பு - pu	பூ - pU



பெ - pe	பே - pE	பை - pai	பொ - po	போ - pO	பௌ - pau
ம - ma	மா - mA	மி - mi	மீ - ml	மு - mu	மூ - mU
மெ - me	மே - mE	மை - mai	மொ - mo	மோ - mO	மௌ - mau
ய - ya	யா - yA	யி - yi	யீ - yl	யு - yu	யூ - yU
யெ - ye	யே - yE	யை - yai	யொ - yo	யோ - yO	யௌ - yau
ர - ra	ரா - rA	ரி - ri	ரீ - rl	ரு - ru	ரூ - rU
ரெ - re	ரே - rE	ரை - rai	ரொ - ro	ரோ - rO	ரௌ - rau
ல - la	லா - lA	லி - li	லீ - lii/ll	லு - lu	லூ - lU
லெ - le	லே - lE	லை - lai	லொ - lo	லோ - lO	லௌ - lau
வ - va	வா - vA	வி - vi	வீ - vl	வு - vu	வூ - vU
வெ - ve	வே - vE	வை - vai	வொ - vo	வோ - vO	வௌ - vau
ழ - za	ழா - zA	ழி - zi	ழீ - zl	ழு - zu	ழூ - zU
ழெ - ze	ழே - zE	ழை - zai	ழொ - zo	ழோ - zO	ழௌ - zau
ள - La	ளா - LA	ளி - Li	ளீ - LI	ளு - Lu	ளூ - LU
ளெ - Le	ளே - LE	ளை - Lai	ளொ - Lo	ளோ - LO	ளௌ - Lau
ற - - Ra	றா - RA	றி - Ri	றீ - RI	று - Ru	றூ - RU
றெ - Re	றே - RE	றை - Rai	றொ - Ro	றோ - RO	றௌ - Rau
ன - nHa	னா - nHA	னி - nHi	னீ - nHI	னு - nHu	னூ - nHU
னெ - nHe	னே - nHE	னை - nHai	னொ - nHo	னோ - nHO	னௌ - nHau

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ஜ் - j	ஸ் - S	ஷ் - sh	ஹ் - h	க்ஷ் - ksh	ஸ்ரீ - sri
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### (10) AIM: Using Find and Replace in Notepad

#### Procedure:

- 1) Open notepad (either press Windows+R, type **notepad**, press Enter
- 2) Type the following text:
  - i. **Tim Berners-Lee**
  - ii. **Leonard Kleinrock**
  - iii. **Blaise Pascal**
  - iv. **Charles Babbage**
  - v. **Konrad Zuse**
  - vi. **Stev Wozniak**
  - vii. **Stev Jobs**
  - viii. **Ada Lovelace**
  - ix. **John Atanasoff**
  - x. **Alan Turing**
  - xi. **Bill Gates**
  - xii. **Richard Stallman**
  - xiii. **Linus Torvalds**
  - xiv. **James Gosling**
  - xv. **Ken Thompson**
  - xvi. **Dennis Ritchie**
  - xvii. **Brian Kernighan**
  - xviii. **Rob Pike**
  - xix. **Bill Joy**
  - xx. **Marc Anderson**
- 3) Press Ctrl+F (Edit->Find) to start search. Enter the phrase for search (say **Jo**). Press Enter or Search button. The first occurrence of given phrase (**Jobs**) is highlighted.

- 4) To search again for the same phrase, press F3. The next occurrence (John) is highlighted.
  - 5) The first name **Stev** is wrong. It should have been **Steve**. To make correction, use Replace facility in Notepad.
  - 6) To open Replace dialog, press Ctrl+H (Edit->Replace) in Notepad. Enter **Stev** against Find what and **Steve** against Replace with. Press Replace or Replace All buttons to make the corrections to the names of Steve Wozniak and Steve Jobs.
  - 7) To go to a particular line number, press Ctrl+G (Edit->Go To). Enter line number. Press Enter or Ok button.
- 

## (11) Typing practice in Notepad

### PROCEDURE:

- 1) Open notepad (either press Windows+R, type **notepad**, press Enter or choose Windows->All Apps->Windows Accessories->Notepad).
- 2) Type the following text for 50 lines (Calibri, 12 point size):

**asdfjf ;lkjhj asdfjf ;lkjhj asdfjf ;lkjhj asdfjf ;lkjhj asdfjf ;lkjhj  
asdfjf ;lkjhj asdfjf ;lkjhj**

- 3) Type the following text for 50 lines (Calibri, 12 point size):

**awerqfa ;oiupj awerqfa ;oiupj awerqfa ;oiupj awerqfa ;oiupj**

- 4) Type the following text for 50 lines (Calibri, 12 point size):

**gftfrf hjyjuj gftfrf hjyjuj gftfrf hjyjuj gftfrf hjyjuj gftfrf hjyjuj  
gftfrf hjyjuj**

- 5) Type the following text for 50 lines (Calibri, 12 point size):

**azxcvf lkmbnj azxcvf lkmbnj azxcvf lkmbnj azxcvf lkmbnj  
azxcvf lkmbnj**

- 6) Type the following text for 50 lines (Calibri, 12 point size):

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**abcdefghijklmnopqrstuvwxyz zyxwvutsrqponmlkjihgfedcba**

7) Type the following words:

ask fad alas asks jag fag glass fall  
hash glad sags galls halls  
salad has lad sad gall gash shall fish rails  
sales agile legal jails  
apple reader roses rupee squeal dislike hedge grass  
joker  
fails walks usual liked orders drawl follow lease  
sledge peak

amazed except journalviolet becoming gracious  
thousand  
January February March April May June July  
August  
September October November December  
point child children rate  
mate fate loot shoot sheet feet meet cot fat  
rat gate late meat  
man van sane insane cane moon fan lane  
mane tan lean peen  
lawn gone phone loan moan shown lawn don fun  
ten men  
trap sap nap leap keep soap pop peep  
reap rope lope tape gap  
read seed feed road God mad pod lead  
head load fade mode shade

I only soon water far play many old the could paper without  
get use around state animal help while other play back earth  
turn which more answer most start story me hard by take  
they you girl see show girl does who night run help new tree  
are might follow into me car above later black many ask back  
without now under own thing one saw think was red hear

upon put out feet part play about on should almost another  
four did place run into work and something earth.

each some same got word seem close city I tell had might  
turn big cut sometimes tell or life when too once study small  
side such these right together people them best tell learn  
something need help here who three and give way why  
without him put live find around saw then said go you world  
before follow want school world much if get her earth story  
saw to more few thing three find its keep those war and but  
each few oil water the get almost line example.

car tree word do may think those live open talk also place a  
page why idea up something enough if place life has by stop  
as while every more show went from these still more large  
they for state mile and live would is family left really up must  
walk over state still need being ask air head into night into  
something fall think great up fall also like group part time  
then turn go then oil out know got was below school below  
no between write began where same.

together why help let four use more page under air any went  
people war list air at enough black side out above find their  
oil same one men hard walk down fire good thought turn  
been took seem miss away thing live will should that each  
than by they could fall write make two name put plant  
around his show take year this story but air that list thing  
really hand next down while before over without father  
through cut talk year her out change off between now had  
under.

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## **(12) Creating a leave letter document using Wordpad.**

### **PROCEDURE:**

- 1) Open Wordpad by choosing Start->All apps->Wordpad  
(or press Windows+R, type WRITE and press enter key).

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- 2) Choose Blue colour for font, Bold & Underline style, centre alignment, 14 points for font size, single line spacing and remove the tick mark in front of add 10 points after paragraph. Type **LEAVE LETTER**.
- 3) Press Enter.
- 4) Choose left alignment (Ctrl+L), 14 point size, blue color and type the following:

**From**

**<Your name>,  
COPA, I-Semester,  
Govt. ITI for Women,  
Puducherry.**

**To**

**The Class Teacher,  
COPA Trade,  
Govt. ITI for Women,  
Puducherry.**

- 5) Set red color, set 1.5 lines spacing and type the following:

**Sir,**

**As I am suffering from fever, I request you to kindly grant me 2 days of Leave on 23.08.2017 and 24.08.2017 please.**

**Thanking you,**

**Yours obediently**

**<Your name>**

**Place: Puducherry**

- 6) Save the letter in a file named <your\_name>-Ex-10.rtf.
  - 7) The default extension for files created using Wordpad is .rtf (Rich Text Format (RTF)).
-

### (13) Menu structure of Wordpad.

#### PROCEDURE:

- 1) Open Wordpad by choosing Start->All apps->Wordpad (or press Windows+R, type WRITE and press enter key).
- 2) The menu layout of Wordpad is given below:
  - a. File (Alt+F)
    - i. New (Ctrl+N or Alt+F+N)
    - ii. Open (Ctrl+O or Alt+F+O)
    - iii. Save (Ctrl+S or Alt+F+S)
    - iv. Save As (Alt+F+A)
    - v. Print (Ctrl+P or Alt+F+P)
      1. Print (Alt+F+R+P)
      2. Quick Print (Alt+F+R+Q)
      3. Print preview (Alt+F+R+V)
    - vi. Page Setup (Alt+F+G)
    - vii. Send by Email (Alt+F+D)
    - viii. About Wordpad (Alt+F+T)
    - ix. Exit (Alt+F+X)
  - b. Home
    - i. Paste (Alt+H+V)
    - ii. Cut (Alt+H+T)
    - iii. Copy (Alt+H+C)
    - iv. Font name (Alt+H+F1)
    - v. Bold (Alt+H+B or Ctrl+B)
    - vi. Italic (Alt+H+I or Ctrl+I)
    - vii. Underline (Alt+H+U or Ctrl+U)
    - viii. Strikethrough (Alt+H+X)
    - ix. Subscript (Alt+H+A1)
    - x. Superscript (Alt+H+Y)
    - xi. Text Highlight Color (Ctrl+H+H)
    - xii. Font Color (Alt+H+C2)
    - xiii. Left align (Ctrl+L or Alt+H+AL)
    - xiv. Centre align (Ctrl+E or Alt+H+AC)
    - xv. Right align (Ctrl+R or Alt+H+AR)
    - xvi. Justify align (Ctrl+J or Alt+H+AJ)
    - xvii. Paragraph (Alt+H+PG)
    - xviii. Picture (Alt+H+PI)

- xix. Drawing (Alt+H+W)
- xx. Insert date (Alt+H+D)
- xxi. Insert Object (Alt+H+O)
- xxii. Find (Ctrl+F or Alt+H+FD)
- xxiii. Replace (Ctrl+H or Alt+H+R)
- xxiv. Select All (Ctrl+A or Alt+H+SA)
- c. View (Alt+V)
  - i. Zoom In (Alt+V+I)
  - ii. Zoom Out (Alt+V+O)
  - iii. 100% (Alt+V+J)
  - iv. Ruler (Alt+V+R)
  - v. Status Bar (Alt+V+S)
  - vi. Word wrap (Alt+V+W)
  - vii. Measurement Units (Alt+V+M)

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**(14) Creating an RTF document with bullet list, numbered list and picture**

**PROCEDURE:**

- 1) Open Wordpad by choosing Start->All apps->Wordpad (or press Windows+R, type WRITE and press enter key).
- 2) Choose Centre alignment (Ctrl+E or Alt+H+AC), set font size to 16, font style to bold, font colour to red. Type the following:

**GEOMETRICAL SHAPES**

- 3) Set font size to 14 points, font colour to blue, left align (Ctrl+L or Alt+H+AL). Type the following:

**List of Geometrical Shapes**

- 4) Choose Start a List (Alt+H+L) from the Home menu. Select numbered list and type the following (note that new numbers are automatically inserted on pressing enter key):

1. **Triangle**
2. **Square**
3. **Rectangle**
4. **Circle**



- 5) Choose font size of 14 points, left alignment (Ctrl+L or Alt+H+AL) and type the following:

**Shapes enlisted above are drawn as follows:**

- 6) Press Windows+R, type “mspaint” and press Enter to open paint.
- 7) Draw a triangle. Save the file (Ctrl+S). Provide <your\_name>-triangle.png to the file.
- 8) Similarly draw square, rectangle and circle using Paint program. Save them in <your\_name>-square.png, <your\_name>-rectangle.png and <your\_name>-circle.png respectively.
- 9) Close MSPAINT.
- 10) From the home menu of WordPad, choose Picture (Alt+H+PI). Choose the drawing file containing triangle. The triangle is inserted in the wordpad document.
- 11) Set centre alignment (Ctrl+E). Type *Triangle* below the shape.
- 12) Follow the same procedure to insert square, rectangle and circle to the file. Save the file (Ctrl+S) in the name <your\_name>-Ex-12.rtf.

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### **(15) Using keyboard shortcuts for document navigation**

#### **PROCEDURE:**

- 1) Open Wordpad (Press Windows+R, enter “write” and press enter).
- 2) Open any document.
- 3) Practice the following keyboard shortcuts for navigating through document:

<b>Sl. No.</b>	<b>Keyboard shortcut</b>	<b>Purpose</b>
1)	Left arrow	Move cursor towards left by one character.
2)	Right arrow	Move cursor towards right by one character.

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3)	Up arrow	Move cursor upwards by one line.
4)	Down arrow	Move cursor downward by one line.
5)	Home	Move cursor to beginning of current line.
6)	End	Move cursor to end of current line.
7)	Ctrl+Home	Move to beginning of document.
8)	Ctrl+End	Move to end of document.
9)	Double click	Select a word
10)	Ctrl+Click	Select the sentence
11)	Shift+first click	Mark start of selection
12)	Shift+Second click	Mark end of selection
13)	Ctrl+A	Select All
14)	Tab	Move to next column in table

### (16) Using keyboard shortcuts for working with Windows Desktop

#### PROCEDURE:

- 1) Open Windows Desktop.
- 2) Practice the following keyboard shortcuts to work with the desktop:

Sl. No.	Keyboard shortcut	Purpose
1)	Windows key	Open Start menu
2)	Window+E	Open File Explorer
3)	Windows+R	Show Run dialog. Enter program name and press enter.
4)	Alt+F4	Close current window. Show shutdown menu if no window is open.
5)	Alt+TAB	Cycle through multiple windows and select the required program window.
6)	Ctrl+Shift+Esc	Show Task Manager
7)	Prt Scr	Copy screen contents to the clipboard
8)	Windows + Prt	Capture desktop window and save

	Scr	the same in a screenshot file.
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## **(17) Working with Windows Desktop.**

### **PROCEDURE:**

- 1) Open start menu in Windows by pressing Start icon using mouse or pressing Windows key or Ctrl+Esc on keyboard.
- 2) To navigate through the Windows menu, press left, right, top and bottom arrows in keyboard or move the mouse.
- 3) To select an item, press enter key from keyboard or click on the item using left button of mouse.
- 4) Each program has a Title bar at top.
- 5) Generally, the File, Save, Undo and Redo buttons appear at the left end of the title bar.
- 6) Iconify (-)/ Maximize or Minimize (square) and Close (X) buttons are placed at the right end of the title bar.
- 7) Status bar of a Window appears at the bottom.
- 8) Vertical scroll Bars appear at the right end of window.
- 9) Horizontal scroll bars appear at the bottom of window.
- 10) To minimize all programs or view the Desktop, press Windows+M. To restore all minimized windows, press Windows+Shift+M.
- 11) To view the desktop when many programs are open, press Windows+D.
- 12) To navigate between several programs, press Alt+Tab. Release Alt+Tab when the required program is highlighted.
- 13) To make a screenshot, press Prt Scr button in keyboard. The screen contents are copied to clipboard. Open any program (mpaint, winword, etc.), press Ctrl+V and get the screenshot.
- 14) To save the screenshot in a file, press Window+Prt Scr. The screenshot is saved in the Pictures folder in

- a file identified by the date and time of the screenshot.
- 15) To move between different icons on the desktop, use arrow keys in keyboard or move the mouse. To open the icon, press enter key or left click the icon.
  - 16) To open **Context Menu**, press Shift+F10 or menu key in the keyboard or Right Click.
  - 17) To share the display between computer monitor and projector, Windows+P in the keyboard.
  - 18) Press F1 to open help for any program.
  - 19) When a program is open, press Alt+F4 to close a program.
  - 20) When no program is open, press Alt+F4, followed by enter key to shutdown or restart the computer.
  - 21) To cycle through screen elements of a Window, press F6.
  - 22) To close an inner window or document, press Ctrl+F4.
  - 23) To display System menu for active window, press Alt+Spacebar.
  - 24) To change keyboard layout (United Kingdom, United State Internation, etc.), press Windows+Spacebar.
  - 25) To display properties for selected item, press Alt+Enter or Right click using mouse, select Properties.
  - 26) To activate menu bar, press F10.
  - 27) To refresh the display, press F5 or Right Click on an empty space in the desktop, choose Refresh.
  - 28) To open Windows Explorer, press Windows+E.
  - 29) To search for files or folders, press Windows+F.
  - 30) To display Windows help, press Windows+F1.
  - 31) To lock the display, press Windows+L.
  - 32) To open run dialog, press Windows+R.
  - 33) To enable/ disable high contrast, press Left Alt+Left Shift+Prt Scr keys.
  - 34) To display process manager, press Ctrl+Shift+Esc.

## Shortcuts for Windows Desktop

No.	Shortcut	Purpose
1	Windows key or Ctrl+Esc	Start menu
2	Windows+M	Minimize all windows
3	Windows+Shift+M	Restore/ Maximize all windows
4	Windows+D	Show desktop
5	Alt+Tab	Select between different programs
6	Prt Scr	Copy screen to clipboard
7	Window+Prt Scr	Save screenshot to Pictures folder
8	Shift+F10 or Menu key	Show context menu
9	Windows+P	Share display with projector
10	F1	Help
11	Windows+F1	Windows Help
12	Alt+F4	Close window; Shutdown if no window is open
13	Ctrl+F4	Close current document
14	F6	Cycle through screen elements
15	Windows+Space bar	Change keyboard layout
16	Alt+Enter	Properties
17	F10	Activate menu
18	F5	Refresh
19	Windows+E	Windows Explorer
20	Windows+L	Lock screen
21	Windows+R	Run dialog
22	Left Alt+Left Shift+Prt Scr	Enable/ disable high contrast
23	Ctrl+Shift+Esc	Task Manager

## (18) Working with Windows File Explorer (or My Computer)

### PROCEDURE:

- 1) Open Windows File Explorer, choose Start->All apps->Windows System->File Explorer (or press Windows+E).
- 2) The left side panel of File Explorer contains the following items:
  - a. Quick Access
  - b. This PC - Desktop, Documents, Downloads, Music, Pictures, Videos, Local Disk (C:), Local Disk (D:), etc., Network, Home Group
- 3) On clicking any of the items enlisted in 2.a or 2.b, the right side starts to display contents of that particular location.
- 4) **To pin a folder to quick access**, choose Home->Pin to Quick Access (or press Alt+H+PI).
- 5) **To Copy selected file**, choose Home->Copy (or press Ctrl+C or Alt+H+CO).
- 6) **To Cut selected file**, choose Home->Cut (or press Ctrl+X or Alt+H+T).
- 7) **To Paste file**, choose Home->Paste (or press Ctrl+V or Alt+H+V).
- 8) **To Copy the path of selected file**, choose Home->Copy Path (or press Alt+H+CP).
- 9) **To paste shortcut to file (not the entire file)**, choose Home->Paste Shortcut (or press Alt+H+PS).
- 10) **To delete an item**, choose Home->Delete->Recycle or Home->Delete->Permanently Delete or Home->Delete->Recycle Confirmation (or press Alt+H+D), choose the item and press enter on Recycle or Permanently Delete or Recycle Confirmation).
- 11) **To rename a file**, choose Home->Rename (or press F2 or Alt+H+R).
- 12) **To create a new folder**, choose Home->New Folder (or press Alt+H+N).

- 13) **To create a new file or folder**, choose Home->Create Item (or press Alt+H+W).
- 14) **To open selected file**, choose Home->Open (or press Alt+H+PE) and choose the appropriate program.
- 15) **To edit selected file**, choose Home->Edit (or press Alt+H+E).
- 16) **To open selected file**, choose Home->Open (or press Alt+H+PE).
- 17) **To open file history**, choose Home->History (or press Alt+H+H).
- 18) **To select all items**, choose Home->Select All (or press Ctrl+A), **To deselect items**, press Alt+H+SN.
- 19) **To invert selection**, choose Home->Invert Selection (or Alt+H+SI).
- 20) **To share a file**, choose Share->Share (or Alt+S+S1).
- 21) **To email a file**, choose Share->Email (or Alt+S+E).
- 22) **To Zip (compress) a file**, choose Share->Zip (or Alt+S+C).
- 23) **To Burn a file to CD or DVD**, choose Share->Burn to Disk (or Alt+S+B).
- 24) **To Print a file**, choose Share->Print (or Alt+S+P).
- 25) **To Fax a file**, choose Share->Fax (or Alt+S+F).
- 26) **To share a file with other users**, choose Share->Share with specific people (or Alt+S+W).
- 27) **To stop sharing a file with others**, choose Share->Stop Sharing (or Alt+S+SS).
- 28) **To change the view of icons**, right Click on a white space of the right side pane hover the mouse on View (or choose View->Layout from menu or press Alt+V+L), choose any one of the layouts: (a) Extra Large Icons, (b) Large Icons, (c) Medium Icons, (d) Small Icons, (e) List, (f) Details, (g) Tiles, (h) Contents.
- 29) **To sort files based on specific criterion**, right Click on a white space on the right pane, hover the mouse on Sort (or choose View->Sort or press Alt+V+O). You may choose to sort the icons in Ascending or Descending order based on (a) Name, (b) Date

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Modified, (c) Size, (d) Date Created, (e) Authors, (f) Categories, (g) Tags, (h) Title.

- 30) **To display items in groups**, right Click on a white space on the right pane, hover the mouse on Group By (or choose View->Group By or press Alt+V+G). You may choose to Group the icons in Ascending or Descending order based on (a) Name, (b) Date Modified, (c) Size, (d) Date Created, (e) Authors, (f) Categories, (g) Tags, (h) Title.
- 31) **To display a checkbox for each selected item**, choose View->Item checkboxes (or press Alt+V+HT).
- 32) **To display file name extension for each file**, choose View->File name extensions (or press Alt+V+HF).
- 33) **To hide a file or folder which has been selected**, choose View->Hide selected (or press Alt+V+HH).
- 34) **To Change Folder Options**, choose View->Options->Change folder and search options (or press Alt+V+Y+O).

No	Shortcut	Purpose
1	Alt+H+PI	Pin to quick access
2	Ctrl+C or Alt+H+CO	Copy
3	Ctrl+X or Alt+H+T	Cut
4	Ctrl+V or Alt+H+V	Paste
5	Alt+H+CP	Copy path
6	Alt+H+PS	Paste shortcut
7	Delete	Move to recycle bin
8	Shift+Delete	Permanently delete
9	F2 or Alt+H+R	Rename
10	Alt+H+N	New folder
11	Alt+H+W	New file or folder
12	Alt+H+PE	Open file
13	Alt+H+E	Edit selected file
14	Alt+H+PE	Open selected file
15	Alt+H+H	File history
16	Ctrl+A or Alt+H+SN	Select All



No	Shortcut	Purpose
17	Alt+H+SI	Invert selection
18	Alt+S+S1	Share selected file
19	Alt+S+E	Email selected file
20	Alt+S+C	Compress/ Zip selected file.
21	Alt+S+B	Burn to CD/ DVD (Disk)
22	Alt+S+P	Print selected file
23	Alt+S+F	Fax selected file
24	Alt+S+W	Share with other users
25	Alt+S+SS	Stop sharing with other users
26	Alt+V+L	Change View settings.
27	Alt+V+O	Order or sort settings
28	Alt+V+G	Grouping settings
29	Alt+V+HT	Display checkbox to select each file
30	Alt+V+HF	Display file name extension
31	Alt+V+HS	Hide selected file or folder
32	Alt+V+Y+O	Folder options
33	Alt+F+N or Alt+F+W+N	Open new Window
34	Alt+F+W+P	New window in new process
35	Alt+F+P or Alt+F+M+P	Command prompt
36	Alt+F+M+A	Command prompt in Administrator mode
37	Alt+F+R or Alt+F+S+R	Power shell
38	Alt+F+S+A	Power shell in Administrator mode
39	Alt+F+O	Folder Options
40	Alt+F+H	Help
41	Alt+F+C	Close

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**(19) File Management using Windows Explorer**  
**PROCEDURE:**

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- 1) Open Windows File Explorer, choose Start->All apps->Windows System->File Explorer (or press Windows+E).
- 2) **Task 1 Copy a file:** Select the file to be copied. Right Click, choose Copy (or press Ctrl+C). Open the folder in which this file is to be pasted. Right Click, choose Paste (or press Ctrl+V).
- 3) **Task 2 Move a file:** Select the file to be copied. Right Click, choose Cut (or press Ctrl+X). Open the folder in which this file is to be pasted. Right Click, choose Paste (or press Ctrl+V).
- 4) **Task 3 rename a file:** Select the file to be to be shared. Right Click, choose Rename (or press F2). Enter the new name for file when the name becomes editable. Press Enter key to complete rename process.
- 5) **Task 4 Compress a file or folder:** Select the file to be to be compressed. Right Click, choose Compress (If a third party program like WinRar is installed, use the options provided by the same). The file or folder would be compressed.
- 6) **Task 5 Unzip a compressed file:** Select the zip file. Right click on the file and choose Extract (or use the options provided by third party compression program like WinRar). The file would be unzipped.
- 7) **Task 6 Open a file with different program:** Select the file to be to be opened using a program other than the default program. Right Click (or hold shift and right click), choose Open With, select the program from the list displayed.
- 8) **Task 7 share a file with other users:** Select the file to be to be shared. Right Click, choose Share With, select the share with specific people.
- 9) **Task 8 share a file with other users:** Select the file to be to be shared. Right Click, choose Share With, select the share with specific people.
- 10) **Task 9 create shortcut to a file:** Select the file to be to be shared. Right Click, choose Create Shortcut. Copy the

shortcut. Paste the shortcut file to wherever you want. Double clicking the shortcut opens the required file.

- 11) **Task 10 Send file to specified locations (Including desktop shortcut):** Select the file. Right Click, choose Send to, select the location (including the Bluetooth targets, desktop, DVD drive, etc.) where the file needs to be sent. A shortcut (in case of desktop) or a full copy (in case of Bluetooth, DVD drive, etc.) will be performed.
- 12) **Task 11 delete a file:** Select the file. Right Click, choose Delete. The file is sent to the recycle bin.
- 13) **Task 12 permanently delete a file:** Select the file. Press Shift+Delete. The file is deleted permanently. File deleted using Shift+Delete cannot be restored from Recycle Bin.
- 14) **Task 13 view file or folder properties:** Select the file. Right Click. Select Properties (at the bottom of the context menu). View the items displayed under General, Security, Details, Previous versions. The file may be hidden or read only (uneditable) by placing tick mark against appropriate tick boxes.
- 15) **Task 14 view drive properties:** Right click on a drive (C:, D:, etc.). Choose Properties. View the total size available in the drive, space used and remaining space. Do not change any property unless you know about that property.

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## **(20) Installing Printer Driver**

### **PROCEDURE:**

- 1) Right click on the driver software installer.
- 2) Choose Run as Administrator.
- 3) Press **Yes** button when confirmation dialog appears.
- 4) After extracting required files, the installer requests you to connect the printer (if not already connected to the computer).
- 5) Place a tick mark against the checkbox when displays the label *I accept the license agreement*.

- 6) Power on the printer and connect the USB cable to an appropriate USB port in the CPU.
  - 7) When the printer is connected, the driver installer detects the printer and completes installation of the software required for the printer.
  - 8) After the installation is complete, a test page is printed when Finish button is pressed.
  - 9) Printer properties can be accessed by opening control panel, typing printer in the search box, choosing Devices and Printers and right clicking on the printer.
- 

## **(21) Working with pen drive**

### **PROCEDURE:**

- 1) Insert the pen drive in the USB slot. Hold Shift key while inserting the pen drive to prevent AutoRun of any program stored in the pen drive.
- 2) **Task 1 Format the pen drive:** Right click the drive letter of the pen drive (on the Navigator pane or My Computer). Choose Format. Provide a label to the Pen drive. Press Start button. The allow the formatting process to complete. Now, the pen drive does not have any previous data and freshly ready for use.
- 3) **Task 2 Copy file from Computer to Pen drive:** Go to Documents (any other folder from which you wish to copy). Select required file. Press Ctrl+C or Right Click, choose Copy. Select the drive name/ drive letter of the pen drive from the Navigation Pane (or My Computer). Press Ctrl+V (or Right click on a blank space, choose Paste).
- 4) **Task 3 Move file from Computer to Pen drive:** Go to Documents (any other folder from which you wish to move). Select required file. Press Ctrl+X or Right Click, choose Cut. Select the drive name/ drive letter of the pen drive from the Navigation Pane (or My Computer). Press Ctrl+V (or Right click on a blank space, choose Paste).

- 5) **Task 4 Copy file from Pen drive to Computer:** Open the pen drive in File Explorer. Select required file. Press Ctrl+C or Right Click, choose Copy. Select the drive name/ destination drive letter from Navigation Pane (or My Computer). Navigate to the required folder. Press Ctrl+V (or Right click on a blank space, choose Paste).
  - 6) **Task 5 Move file from Pen drive to Computer:** Open the pen drive in File Explorer. Select required file. Press Ctrl+X or Right Click, choose Cut. Select the drive name/ destination drive letter from Navigation Pane (or My Computer). Navigate to the required folder. Press Ctrl+V (or Right click on a blank space, choose Paste).
- 

## **(22) Burning a file to Optical Drive (CD/ DVD) using Windows Explorer**

### **PROCEDURE:**

- 1) Insert a blank Compact Disk (CD) or Digital Versatile Disk (DVD) in the optical drive.
  - 2) A dialog for writing files to CD/ DVD appears. There are 2 options available for burning files:
    - a. **Like a USB Flash drive:** This mode permits writing in data disk mode. Burnt files can be deleted, overwritten and new files can be appended later.
    - b. **With a CD/DVD Player:** The files are written in a manner suitable for reading in CD player or DVD player. The files can be viewed in computers as well.
  - 3) After typing a Title for the Disk, chose the Disk Mode. Press Next. A lengthy formatting process takes place. Wait until the formatting is completed.
  - 4) Copy or drag and drop required files to the CD or DVD.
  - 5) After finishing the copying work, open File Explorer, right click on the drive letter of the CD/DVD writer and choose Finalize this session.
  - 6) Wait until the CD/ DVD is finalized.
  - 7) Right click on the CD/ DVD drive icon. Select Eject from the context menu and wait till the CD/ DVD is ejected.
-

**(23) Burning multiple sessions on CD/ DVD using Windows Explorer**

**PROCEDURE:**

- 1) Insert the Compact Disk (CD) or Digital Versatile Disk (DVD) containing data burnt in previous sessions in the optical drive.
  - 2) Copy the files to be added appended to the CD/ DVD (or use drag and drop or press the Add button to add new files.
  - 3) After adding required files, open right click on the CD/ DVD drive icon in Windows Explorer and choose close session.
  - 4) After closing the session, choose Eject to complete the multi-session burning of CD/ DVD.
- 

**(24) Creating Data CD/ DVD using Burn Aware Free Software**

**PROCEDURE:**

- 1) Insert CD/ DVD in the optical drive.
  - 2) Open BurnAware software and choose Data Disk.
  - 3) Press Add button.
  - 4) Select required files and press Add files button at the bottom of the dialog.
  - 5) Close the file addition dialog.
  - 6) Press Burn button.
  - 7) Wait till the finishing of burning operation. The CD/ DVD is ejected on completion of burning.
- 

**(25) Creating ISO image file using Burn Aware Free Software**

**PROCEDURE:**

- 1) If you wish to create ISO image file from an existing CD or DVD, insert the disk in the drive.
- 2) Open BurnAware free software and choose Copy to ISO.
- 3) If you wish to create an ISO image using data files, choose Make ISO. Select the files to be added to the ISO.
- 4) Press Make button.

- 5) Choose the directory and enter a name for the ISO image.
  - 6) Wait until the image file is created.
- 

### **(26) Burning ISO image to CD/ DVD using Burn Aware Free Software**

#### **PROCEDURE:**

- 1) Copy the ISO image of Ubuntu (or any other software given to you) to the hard disk of the computer (preferably D: drive).
  - 2) Insert blank DVD (or CD in the computer).
  - 3) Open BurnAware. Choose Burn ISO from the left side panel or the File menu.
  - 4) In the Burn ISO menu, click Browse button and choose the ISO image copied by you.
  - 5) Click the Burn button or choose Burn from File menu.
  - 6) Wait until the burning process is completed.
  - 7) On completion, the CD/ DVD is automatically ejected from the tray.
- 

### **(27) Control Panel – Setting Clock, Language and Region**

#### **PROCEDURE:**

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
- 2) At the top right corner, there is a search box. You can type specific control panel item in the search box to find results.
- 3) Choose the blue arrow next to View By label on the top right of the control panel. Set the value to Category (instead of Large Icons or Small Icons).
- 4) The following category view is displayed by control panel:

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- 5) Choose Clock, Language and Region. 3 items named Date and Time, Language and Region are displayed.
- 6) Choose Date and Time to adjust the time.
- 7) Set time zone to (UTC +5.30) Chennai, Kolkata, Mumbai, New Delhi.
- 8) Choose Language from the Clock, Language and Region menu.
- 9) Languages may be added by pressing Add Language button. If Remove button is enabled, language may be removed from the list. Usually, English (United Kingdom) and English (United States International) are the languages selected.
- 10) Input method refers to keyboard layout. Each language is accompanied by a preferred input method or keyboard layout.
- 11) Choose Region from Clock, Language and Region category. Set the region to English (India) or English (United Kingdom). (Choosing English (United States) is not advisable since it displays date in MM/DD/YYYY format and causes a lot of confusion.)

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### (28) Control Panel – Setting Appearance and Personalization

#### PROCEDURE:

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
- 2) Set View By property to Category.
- 3) Choose Appearance and Personalization. The following items are displayed:



- a. Personalization – Change theme, sound effect, screen saver.
  - b. Display – Make screen items larger or smaller, Adjust screen resolution.
  - c. Taskbar and navigation
  - d. Ease of access centre – Low vision, screen reader, easy access keys, high contrast on or off.
  - e. File Explorer options – Single or double click open, show hidden files/ folders.
  - f. Fonts – Manage fonts, change font settings, adjust cleartype text.
- 4) Under Personalization section, set the theme, background, sound effects and screen saver to be used when the computer is idle.
  - 5) Under display section, adjust the size of font and other display elements. Screen resolution, screen orientation, etc. can be adjusted under this section.
  - 6) Taskbar properties like auto-hide, display taskbar at bottom, top, left or right of screen, etc. can be controlled from this section.
  - 7) The ease of access section displays the same items reached through clicking Ease of Access from category view of control panel.
  - 8) The 4 basic ease of access items displayed at the top of the screen are:
    - a. Screen Magnifier – to enlarge parts of screen.
    - b. Start narrator – to read the text pointed by the mouse pointer.
    - c. Start onscreen keyboard – A keyboard which can be operated using mouse.
    - d. Setup high contrast – set the parameters to be used in high contrast mode.
  - 9) Under File Explorer Options, choose Single click or Double click to open files and folders. You can also choose to display hidden files.

- 10) Fonts can be managed using Fonts section. You can choose to adjust the screen display settings by selecting Adjust cleartype text.

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**(29) Control Panel – Managing User Accounts**

**PROCEDURE:**

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
- 2) Set View By property to Category.
- 3) Choose User Accounts.
- 4) Click User Accounts again. The first 2 items display Change your user name and Change your account type. You may set a new name to your account or downgrade your account from administrator to standard.
- 5) On Pressing Manage Another Account, the existing user accounts are displayed. Click any one of the accounts to see the following settings:
  - a. Change the account name – already explained
  - b. Change the password – Set or change password for selected account
  - c. Change the account type – already explained
  - d. Delete the account – Delete selected account.
  - e. Manage another account
- 6) Choose Manage another account again.
- 7) New user account may be added by clicking the link Add a new user account in PC settings. Click the + Add someone else to this PC. Enter User Name. Type the password and retype the same to confirm the password. Password hint is a tip to guess the password in case it is forgotten.
- 8) Press Next button to complete the user account creation.
- 9) By default, new user is created under Standard user. You may choose to change the user to Administrator to permit access to system settings.
- 10) You can see the new account from the Use Accounts, Manage Another Account section of control panel.

### (30) Control Panel – Managing programs

#### PROCEDURE:

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
- 2) At the top right corner, there is a search box. You can type specific control panel item in the search box to find results.
- 3) Select Category under View by option.
- 4) Choose Programs category.
- 5) The following options are available under programs section:
  - a. **Programs and Features** – Uninstall a program, Turn Windows features on or off, View installed updates, Run programs made for previous version of Windows, How to install a program.
  - b. **Default Programs** – Change default settings for media devices, Make a file type always open in a specific program, Set your default programs.
- 6) To uninstall a program, choose Programs -> Programs and Features->Uninstall a program. Choose the program to be uninstalled. Make the choices for uninstallation.
- 7) To turn on or off some framework or library feature in Windows, choose Programs->Programs and Features->Turn Windows Features on or off. Make a mark or remove a mark against the feature of Windows that should be turned on or off.
- 8) To change the default programs used for opening video or audio disk, choose Programs->Default Programs->Change default settings for media devices. Choose the program to be used for each device type and media type.
- 9) To change the default program used to open a specific file name extension, choose Programs-

>Default Programs->Make a file type open in a specific program.

- 10) To associate each program with specific file types, choose Programs->Default Programs->Set Default Program.
- 

### **(31) Control Panel – Ease of Access**

#### **PROCEDURE:**

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
  - 2) At the top right corner, there is a search box. You can type specific control panel item in the search box to find results.
  - 3) Select Category under View by option.
  - 4) Ease of access is available as a separate item and under Appearance and Personalization->Ease of Access Centre.
  - 5) To set basic settings for use of computer under visually impaired or other accessibility mode, choose Ease of Access->Ease of Access Centre. It displays Start magnifier, start narrator (reads out), start on screen keyboard, set up high contrast.
  - 6) The ease of access centre contains Use a computer without a display, make the computer easier to see, Use the computer without a mouse or keyboard, Make the mouse easier to use, Make the keyboard easier to use, Use text or visual alternatives for sounds, Make it easier to focus on tasks, Make touch and tablet easier to use.
  - 7) To control the computer using voice commands and to type to documents using dictation, choose Ease of Access->Speech Recognition->Start Speech Recognition.
  - 8) You can set up a microphone, take speech tutorial and train your computer for speech recognition from Ease of Access->Speech Recognition->Start Speech Recognition section.
-

## (32) Control Panel – Network and Internet

### PROCEDURE:

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
  - 2) At the top right corner, there is a search box. You can type specific control panel item in the search box to find results.
  - 3) Select Category under View by option.
  - 4) Choose Network and Internet. The following items are displayed: (i) Network and Sharing Centre, (ii) Home Group, (iii) Internet Options.
  - 5) To view connection status in a network, connect to a new network or to trouble shoot any network connection issues, choose **Network and Internet->Network and Sharing Centre**.
  - 6) When several computers are connected through a common networking device (modem, bridge, switch, hub, etc.), Home Group can be created. Home group helps in file and printer sharing. To manage home group, choose **Network and Internet->Home Group**.
  - 7) Home page for browsing and browsing history may be managed using **Network and Internet->Internet Options->General**.
  - 8) Security Level (Internet, local Intranet, trusted site, restricted site) may be set using **Network and Internet->Internet Options->Security**.
  - 9) Popup-Blocker may be enabled or disable using **Network and Internet->Internet Options->Privacy**.
  - 10) Security certificates, auto-complete options and feeds and web slices may be managed using **Network and Internet->Internet Options->Content**.
  - 11) The default programs used for accessing Internet and opening downloaded files may be managed using **Network and Internet->Internet Options->General**.
-

**(33) Control Panel – Hardware and sound**

**PROCEDURE:**

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
- 2) At the top right corner, there is a search box. You can type specific control panel item in the search box to find results.
- 3) Select Category under View by option.
- 4) Choose Hardware and sounds. The following sections are available under this category:
  - a. Devices and printers – List of printers, scanners and other peripherals connected to the computer is displayed. Press Add a device or Add a printer to add new device/ printer to the computer. Driver for the new device should be available.
    - i. Right click on a printer. Choose See what is printing to view print jobs underway, choose Set as Default Printer to make the printer default or choose Preferences to set paper size, toner mode, etc.
    - ii. Select AutoPlay option to set default programs to open media containing audio, video, etc.
    - iii. Choose power options to set battery usage modes (Performance/ Balanced and Power saver).
    - iv. Display option permits setting the scaling level and display font size (same as the one found under Appearance and Personalization).
    - v. Windows mobility centre provides a single point access to display brightness, sound, Battery status, power manager, connecting to external displays,

synchronization and presentation settings.

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### (34) Control Panel – System and Security

#### PROCEDURE:

- 1) Open Control Panel using Start->All Apps->Windows Settings->Control Panel (or press Windows+R, type CONTROL followed by Enter key).
- 2) At the top right corner, there is a search box. You can type specific control panel item in the search box to find results.
- 3) Select Category under View by option. Choose System and Security.
  - a. Open **Security and Maintenance** to set Firewall on or off, virus protection on or off, disable apps that automatically start and to check for solutions for unreported problems. **Recovery** option resets the PC.
  - b. **Windows Firewall** section may be used to enable or disable firewall protection in the PC.
  - c. **System** section may be used to see the amount of RAM, processor type and Windows activation status.
  - d. **Device Manager**, available as a tab on the Navigation panel of System section helps to update drivers for devices.
  - e. **Power Options** are the same as that available under Devices and Printers.
  - f. **File History** permits automatic backup of data in another drive, for recovery in case the original data is lost.
  - g. **Backup and Restore** creates system backup. Restore can be performed when the system runs in to trouble.
  - h. **Storage spaces** can set backup options to store data in 2 or more drives. This helps complete recovery of data even if one drive fails.

- i. **Administrative Tools** help to control Computer Management (Disk Management), Defragment drives, Disk cleanup, Print Management, Services running in the background, Task scheduler, Windows firewall and Windows memory diagnostics.

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### (35) Changing settings in Windows 10

#### PROCEDURE:

- 1) Open settings from Start menu -> Settings.
- 2) Open the following settings and make changes to the settings:
  - a. **System:** Make changes to brightness, sound (audio devices), notifications and actions, focus assist, power & sleep, battery performance, storage, tablet mode (behaves like a phone/tablet), multitasking, projecting to this PC, clipboard, Remote desktop and about PC.
  - b. **Devices:** Change the settings for Bluetooth devices, printers and scanners, mouse, touchpad, typing, pen & windows ink, autoplay and USB.
  - c. **Phone:** Link a phone to the computer.
  - d. **Network and Internet:** Make changes to status, WiFi, dialup, VPN, Airplane mode, Mobile Hotspot, Data Usage, Proxy.
  - e. **Personalization:** Background, colours, lock screen, themes, fonts, start, taskbar.
  - f. **Apps:** Make changes to apps and features, default apps, offline maps, apps for websites, video playback, startup.
  - g. **Accounts:** Make changes to basic info, email accounts, sign-in options, access work or school, family & other users, sync your settings.
  - h. **Time & language:** Make changes to time, region and language and speech.



- i. **Gaming:** Make changes to game bar, capture, broadcasting, game mode, Xbox networking.
- j. **Search:** Make changes to permissions & history, searching windows and more details.
- k. **Cartana:** Make changes to talk to Cartana, permissions, etc.
- l. **Privacy:** Make changes to location sharing, camera, microphone, etc.
- m. **Update and security:** Manage windows updates and security settings

### (36) Managing BIOS settings

#### PROCEDURE:

- 3) BIOS settings are accessible when the computer is just powered on.
- 4) Different motherboards have different key to access BIOS (displayed at the time of start up). Some of the most common keys to enter BIOS are: (i) DEL – legacy; (ii) F2 (Acer); (iii) Esc (HP), etc.
- 5) Under Information section, look at the general details of the computer.
- 6) Under Main category, change the date, time, etc.
- 7) Under Security section, set password for user or supervisor.
- 8) Under Boot section, set the boot device priority (first, second, third, etc. boot devices).
- 9) Normally, pressing F10 saves the data and exits BIOS.
- 10) Use Tab to move between different sections of the same settings.
- 11) Use Up and Down arrows to access change BIOS settings.
- 12) Some BIOSes use + or – to change BIOS values. Some other BIOSes use F5 and F6 for changing options.
- 13) You can set the Optimal System defaults through Exit menu (Normally accessed through F9 shortcut).

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- 14) Each BIOS displays tips at the bottom and right side to help manage the BIOS values correctly.

### (37) Working with MS DOS

#### PROCEDURE:

- 1) To open command prompt in normal user mode, choose Start->All Apps->Windows System->Command Prompt or Press Windows+R, type CMD and press Enter key.
- 2) Use the following commands for practice purpose:

Sl. No.	Command	Purpose	Usage example
1	Explorer .*	Open Windows Explorer for current directory	Explorer .
2	DIR	List files and directories. Shows date of creation, time of creation, whether directory, file size and file name	DIR DIR /? – help DIR /W – Width-wise list
3	NOTEPAD*	Create a text file with given name.	NOTEPAD COPA.TXT creates a text file named COPA.TXT. Type a list of names.
4	COPY	Copy file1 file2 – copies file1 to a new file2. If multiple files are to be copied, the last file should be a directory.	COPY COPA.TXT COPA1.TXT
5	DEL	Delete given file.	DEL COPA1.TXT
6	CD	Change directory. Default directory is called HOME directory (e.g. C:\Users\COPA). Special directory named . denotes current	CD Desktop CD .. – Move to parent directory

		directory. Special directory named .. denotes parent directory.	
7	REN	Renames given file to new name.	REN COPA.TXT COPA2.TXT
8	TYPE	Displays contents of a file on the command window.	TYPE COPA2.TXT displays contents of file named COPA2.TXT in the command window.
9	CLS	Clear screen. Clears the command window and places the cursor at the topmost line.	CLS
10	DATE	Displays system date. If date is to be reset, enter new date separated by – symbol (E.g. 23-09-2017). New date will be accepted by the system only if the command window is opened with Administrator privilege.	DATE
11	TIME	Displays system time. To change time, enter new time in HH.MM.SS format.	TIME

\* - Not an MS DOS command. Used for convenience

3) Type exit to close MS DOS window.

### **(38) Working with MS DOS – Internal DOS Commands**

**PROCEDURE:**

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1) To open command prompt in normal user mode, choose Start->All Apps->Windows System->Command Prompt or Press Windows+R, type CMD and press Enter key.

2) Use the following commands for practice purpose:

Sl. No	Command	Purpose	Usage example
1	VER	Displays version of MS DOS	VER
2	VOL	Displays volume information (name, serial number, etc.) for given drive. If no argument is provided, current volume details are displayed.	VOL VOL D:
3	COPY CON	Copy the keyboard input to a file. To end the copying process, press Ctrl+Z followed by ENTER	COPY CON TEMP.TXT CPU Monitor Mouse Keyboard ^Z Enter

		key.	
4	ERASE	Deletes given file.	ERASE TEMP.TXT
5	MD / MKDIR	Make a directory with given name.	MD COPA MKDIR ITI
6	RD / RMDIR	Delete given directory	RD ITI RMDIR COPA
7	ECHO	Turns echo mode on or off. Echo can display environment variables, if they are enclosed inside % symbols	ECHO OFF DIR ECHO ON ECHO %PATH%
8	PATH	Environment variable containing the list of directories in which executable files are to be searched.	PATH=%PATH%;C:\Users\COPA\ TMP ECHO %PATH%
9	PAUSE	Displays the message "Press any key to continue"	PAUSE

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		..."	
10	PROMPT	Set new value for prompt. Calling prompt without any argument restores default prompt.	PROMPT # PROMPT \$\$ PROMPT
11	REM	Remarks. Rest of the line is ignored.	REM I am student of COPA trade.
12	SET	Set new value for environment variable.	SET PATH=%PATH%;C:\ SET X=5 ECHO %X%

Type exit to close MS DOS window.

**(39) Working with MS DOS – External DOS Commands**

**PROCEDURE:**

- 1) To open command prompt in normal user mode, choose Start->All Apps->Windows System->Command Prompt or Press Windows+R, type CMD and press Enter key.
- 2) Use the following commands for practice purpose:

Sl. No.	Command	Purpose	Usage example
1	APPEND	Appends given value to the end of environment variable (like PATH).	Removed from MS DOS.
2	ASSIGN	Assigns new drive letter in place of existing	Removed from MS DOS.

		drive letter.	
3	ATTRIB	Files can be set to Hidden, Archive or Read-only modes. Use + symbol to set and – symbol to unset the property	ATTRIB +R TEMP.TXT ATTRIB +H TEMP.TXT ATTRIB +A TEMP.TXT ATTRIB –R –H –A TEMP.TXT
4	BACKUP	Backup given files to specified destination.	Removed from MS DOS.
5	CHKDSK	Check given disk for errors and correct the errors. Requires administrator privilege.	CHKDSK D:
6	COMMAND.COM	Command prompt. This command has been removed. CMD is the new DOS Shell.	Removed.
7	COMP	Compare given files and report the first mismatch.	(COPY TEMP.TXT TMP.TXT) COMP TEMP.TXT TMP.TXT
8	DEBUG	Check the given program for runtime errors.	Removed from MS DOS.
9	DISKCOMP	Compare contents of 2 disks.	Removed from MS DOS.
10	DISKCOPY	Copies contents of one disk to another.	Removed from MS DOS.
11	DOSKEY	Maintain history of DOS commands and display them when UP arrow is pressed.	DOSKEY
12	DOSSHLL	Opens visual shell for command prompt.	Removed from MS DOS.
13	EDIT	Edit a new file with	Removed from MS

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		given name.	DOS.
14	EDLIN	Edit a single line.	Removed from MS DOS.
15	EXPAN D	Decompress given zip file.	EXPAND TEMP.ZIP
16	FC	Compare given files and report differences.	FC TEMP.TXT TMP.TXT
17	FDISK	Create new partition table.	Removed from MS DOS.
18	FORMA T	Formats given drive.	Do not use this command. It may damage your drives.
19	HELP	Display list of supported MS DOS commands.	HELP HELP DOSKEY
20	LABEL	Change label for given drive. Requires administer privilege.	LABEL D: BACKUP
21	MEM	Displays memory usage details.	Removed from MS DOS.
22	MIRRO R	Create a backup file named MIRROR.FIL	Removed from MS DOS.
23	MORE	Displays large output in readable portions. Press enter key to read line by line and space bar to move pages.	HELP   MORE
24	MOVE	Copy a file to new name and delete the source file.	MOVE TEMP.TXT TEST.TXT DIR
25	PRINT	Prints given file to default printer	PRINT TEST.TXT
26	SCANDI SK	Checks disk for errors. No longer supported.	Removed from MS DOS.
27	SORT	Sorts the contents of given file. Use /R to sort	SORT TEMP.TXT SORT /R TEMP.TXT



		in reverse order.	
28	SYS	Creates a bootable disk drive.	Removed from MS DOS.
29	TREE	Displays directory and files in tree structure	TREE
30	UNDEL ETE	Restores a deleted file of given name.	Removed from MS DOS.
31	XCOPY	Extended copy mode for copying files and directories.	XCOPY TEMP.TXT TMP.TXT

3) Type exit to close MS DOS window.

### **(40) Creating MS DOS Batch file**

#### **PROCEDURE:**

- 1) To open command prompt in normal user mode, choose Start->All Apps->Windows System->Command Prompt or Press Windows+R, type CMD and press Enter key.
- 2) To start editing a batch file named <name>.bat, type "notepad <name>.bat".
- 3) Type the following content, save the file and close notepad:

**@ECHO OFF**

**ECHO You will get directory listing when you press any key**

**PAUSE**

**DIR**

**ECHO You will get time when you press any key**

**PAUSE**

**TIME**

- 4) Type <name> in the command prompt (.bat extension is optional) to make the batch file to work.
- 5) To create another batch file for input and sorting, type "notepad <name1>.bat".
- 6) Type the following contents, save the file and close notepad.

**@ECHO OFF**

**ECHO Input names of at least 5 computer components. Press Ctrl+Z Enter to end input**

**COPY CON TMP.TXT**

**ECHO .**

**ECHO Press any key to see the contents of file typed by you**

**PAUSE**

**TYPE TMP.TXT**

**ECHO .**

**ECHO Press any key to see the sorted list of items (ascending)**

**PAUSE**

**SORT TMP.TXT**

**ECHO .**

**ECHO Press any key to see the sorted list of items (descending)**

**PAUSE**

**SORT /R TMP.TXT**

7) Type exit to close MS DOS window.

---

## **(41) Installation of Windows Operating System (Windows 10)**

### **PROCEDURE:**

- 1) Attach the CD/ DVD/ Pen drive containing installation files for Windows operating system in your computer.
- 2) Boot the computer. Look at the BIOS post message. Press the designated key to enter BIOS settings (DEL, Esc, F2, Enter, etc.).
- 3) Change the first boot device to the drive/ media containing Windows operating system.
- 4) When the message stating "Press any key to boot from CD or DVD ..." appears, press any key. Windows operating system begins to load.
- 5) The Windows installer requests you to choose the language for installation (choose English), time and currency format (choose English United Kingdom or English India), Keyboard or input format (choose

English United States International). Press Next button.

- 6) Press Install now to start the installation.
- 7) Enter product key, if the screen for product key entry appears. The hyphen symbol appears automatically if you keep typing. Remember to distinguish between 1 and I, 0 and O.
- 8) The EULA (End User License Agreement) appears. Read and press tick mark against accept. Press Next button.
- 9) The option screen requesting to choose an Upgrade to existing operating system or Custom/ Fresh installation of Windows appears. Choose Custom.
- 10) The partitioning screen appears. If there is a previous operating system, the drives are shown. Delete all the drives.
- 11) Press New when keeping the cursor on unpartitioned space. Enter the size to be allotted to the C: drive first.
- 12) The size is entered in MB (Enter 20480 for 20GB, 51200 for 50 GB, 102400 for 100 GB, 153600 for 150 GB, 204800 for 200GB – the size in GB multiplied by 1024).
- 13) On creating the first partition, Windows will show a dialog stating that additional partitions are required. Press OK. It will create one of more additional partitions.
- 14) Create several other partitions. The size rule is  $M = 1024 * G$ , where M is size in Mega Byte and T is size in Giga Byte.
- 15) Format each partition after creating it.
- 16) Choose the first large partition (not the 100MB to 500MB partition created by the operating system for reserved purposes, which is too small for installation).
- 17) The installation starts. Wait until the installation is completed.

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- 18) When the system reboots, do not press any key during startup. Because, you will end up doing steps 4 to 17 again and again instead of configuring newly installed Windows.
- 19) Enter the network settings (or choose Skip).
- 20) Manage the detailed settings of Windows (or press Express Settings).
- 21) Enter the user name and password for new user.
- 22) Login to the newly installed Windows operating System.

---

### **(42) Installation of MS Office and other Application software packages in Windows**

#### **PROCEDURE:**

- 1) Insert the media (CD/ DVD or Pen drive).
- 2) Right click on the Setup.exe file of MS Office. Choose Run as Administrator.
- 3) When a confirmation screen appears, choose OK to run the program with Administrator privileges.
- 4) Enter product key for the MS Office Software.
- 5) Press Next button.
- 6) Choose complete installation of MS Office.
- 7) Allow the installation to finish.
- 8) Install AdobeReader, WinRar, Azhagi+ and BurnAware software packages. For installation, always right click and choose Run as Administrator.
- 9) Install GIMP for image editing.
- 10) Install OpenOffice, which is an alternate to MS Office for preparation of documents.
- 11) Install Photoshop/ GIMP, if needed for image editing.

---

### **(43) Installation of Ubuntu Linux**

#### **PROCEDURE:**

- 1) Insert the media (CD/ DVD or Pen drive) containing Ubuntu Linux operating system.
- 2) Choose Start->Power and press Shift+Restart in the previous Windows operating system.

- 3) Hit the BIOS or boot menu key when the BIOS loads on restart.
- 4) Choose the Ubuntu Linux DVD as the boot source.
- 5) Wait until the menu containing Try Ubuntu and Install Ubuntu appears. Choose Try Ubuntu.
- 6) When the Ubuntu operating system loads, double click Install Ubuntu from the Desktop.
- 7) Choose English language for installation. Press Continue.
- 8) Choose Do not connect to WiFi network. Press Continue.
- 9) Place a tick mark against install third party software. Press Continue.
- 10) Choose Something else for multiple operating system installation options. Press Continue.
- 11) Delete (- symbol) the last partition (/dev/sda4 or /dev/sda6) which has more than 30GB space.
- 12) Add (+ symbol) new partition having 90% of the space available, select / against mount point and Ext4 against file system type.
- 13) Press Ok. New partition is created.
- 14) Add new partition in the available free space (+ symbol). Choose Swap against partition type. Press OK to add new partition.
- 15) Press Install Now to install the operating system on the partition having / against mount point.
- 16) Choose Kolkata against time zone.
- 17) Choose English US against keyboard layout.
- 18) Enter user name and password. Confirm the password. Press Continue.
- 19) Wait until the installation completes.
- 20) After completing the installation, Ubuntu Linux restarts.
- 21) When the DVD is ejected, remove the DVD and restart the computer.
- 22) When the operating system menu appears, choose Ubuntu Linux.

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- 23) After logging in, press Alt key or Windows key, enter terminal and open terminal application.
  - 24) Type `cd /boot/grub`.
  - 25) Type `sudo gedit grub.cfg`. Enter your password when requested.
  - 26) Count the menu entry number for Windows operating system and enter the same against default. The counting starts with 0 (zero).
  - 27) Start working with Linux operating system.
- 

### (44) Working with Linux shell commands - Part 1

#### PROCEDURE:

- 1) Open Linux operating system.
- 2) Login using your ID and password.
- 3) Press Windows (or Alt) key. Type Terminal (which brings terminal into view). Click on Terminal icon to open bash (Bourne Again Shell) in Linux.
- 4) To display file listing, use **ls** command (try `ls`, `ls -l`, `ls -a`, `ls -d`, `ls *.txt`).
- 5) To create new directory, use **mkdir** (try: `mkdir name`, `mkdir iti`).
- 6) To remove a directory, use **rmdir** (try: `rmdir name`, `rmdir iti`).
- 7) To create a text file (fl.txt) from command line, type **cat - > fl.txt**. The - symbol denotes keyboard (standard input).
- 8) To copy file, use **cp** (try: `cp fl.txt fl1.txt`, `cp fl1.txt fl2.txt`).
- 9) To move a file, use **mv** (Try: `mv fl2.txt fl3.txt`).
- 10) To change to a new directory, use **cd** command (Try: `cd iti`, `cd ..`, `cd ~`, `cd /`, `cd`).
- 11) To know the current directory, use **pwd** (Try: `pwd`).
- 12) To know who are logged in, use **finger**.

- 13) To know the operating system type and version, use **uname -a**.
- 14) To mount a file system, use **mount** command.
- 15) To un-mount a file system, use **umount** command.
- 16) To eject a cd or dvd, use **eject /dev/sdb** (or device name).
- 17) To power off a computer, use **shutdown -h now** (Try: shutdown -h 20s).
- 18) To restart a computer, use **shutdown -r now** (Try: shutdown -r 20s).
- 19) To stop processing for specified duration, use **sleep <duration>** command (Try: sleep 40s).
- 20) To sort contents of a file, use **sort fl** (Try: sort fl.txt, sort fl1.txt).
- 21) To delete a file, use **rm** command (Try: rm fl2.txt).
- 22) To display system date and time, use **date** command (to change change date, use sudo date yymmddhhMMss).
- 23) To link a file to a new name, use **ln** (Try: ln fl.txt fl5.txt).
- 24) To create a tape archive file, use **tar czf <file/ folder>** (Try: tar czf fl.txt).
- 25) To unzip the contents of an archive file, use **tar xzf <archive>**. (Try: tar xzf fl.tar).
- 26) To compress a file, use **zip** or **gzip** (Try: zip fl.txt, gzip fl1.txt).
- 27) To uncompress a zip or gzip file, use **unzip** or **gunzip** (Try: unzip fl.zip, gunzip fl1.gzip).
- 28) To display help on a command, use **man <command>** (Try man mv).
- 29) To calculate results of numerical expression, use **bc**.

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- 30) To display calendar, use **cal** command. (Try: `cal 10 2017`, `cal 2018`).
  - 31) To calculate time taken for a program to complete, use **time <program>**.
  - 32) To display contents of file on the screen, use **cat** (Try: `cat fl.txt`, `cat fl1.txt`).
- 

## (45) Working with Linux shell commands - Part 2

### PROCEDURE:

- 1) Open Linux operating system.
- 2) Login using your ID and password.
- 3) Press Windows (or Alt) key. Type Terminal (which brings terminal into view). Click on Terminal icon to open bash (Bourne Again Shell) in Linux.
- 4) To set date and time use `sudo date MMDDhhmmYY` or `sudo date MMDDhhmmYYYY` (try `sudo date 1011093517`, `sudo date 101109352017`). Enter password when the system prompts.
- 5) To create a text document use `gedit welcome.c`. Type the following lines and save the file:

```
#include <stdio.h>
void main()
{
printf("Welcome to C!\n");
}
```

- 6) To compile C language program, use `cc` command (try: `cc welcome.c, ./a.out`).
- 7) To change to special directories (`/` - root directory, `~` - Home directory, `.` - Current directory, `..` - parent directory), try `cd /`, `cd ~`, `cd` and `cd ..`.
- 8) To change owner and group names for a file, use **sudo chown root.root welcome.c**. To reverse the ownership of file to COPA, use **sudo chown vn.vn welcome.c**.



- 9) To count the number of lines, words and characters in a file, use **wc** (Try: `wc welcome.c`, `wc -l welcome.c`, `wc -w welcome.c`, `wc -m welcome.c`).

---

## (46) Changing file permissions in Linux

### PROCEDURE:

- 1) Open Linux operating system.
- 2) Login using your ID and password.
- 3) Press Windows (or Alt) key. Type Terminal (which brings terminal into view). Click on Terminal icon to open bash (Bourne Again Shell) in Linux.
- 4) Linux supports 3 permission (Execute – 1, Read – 2, Write – 4) for 3 login credentials (UGO - User, Group, Others).
- 5) To grant all 3 permission, the number is 7 (1+2+4 = 7). To grant read and write permission, the number is 6 (2+4 = 6). To grant read only permission, the number is 4. To grant read and execute permissions, the number is 3 (1+2 = 3).
- 6) Create a file <name>.txt using **gedit add.sh**. Type the following code in the file and save:

```
#!/bin/sh
```

```
echo "Enter x: "
```

```
read x
```

```
echo "Enter y: "
```

```
read y
```

```
z=`expr $x + $y`
```

```
echo "$x + $y = $z"
```

- 7) Type `ls -l`. The `add.sh` does not have execute permission.
- 8) To grant execute, read and write permission to the owner, execute and read permissions to group and others, use the command **chmod 755 add.sh**. (Now type `./add.sh` to run the shell script. It adds 2 numbers.)
- 9) To make the shell script have x, r, w permissions for all, use **chmod 777 add.sh**.

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- 10) To grant all permissions to owner and only read permission to others, use **chmod 744 add.sh**.
  - 11) To redirect input from a file, use **<** operator (Try: `cat - > in.txt`, type 25 36, Ctrl+d. Type `add.sh < in.txt`).
  - 12) To substitute one letter for another (suppose all caps for small letters), use **tr [old-list] [new-list]** (Try: `cat welcome.c | tr [a-z] [A-Z]`).
  - 13) To know location of a file in path, use **which** (Try: `which cal`, `which sh`).
  - 14) To know the type of file based on its content, **file** (file `add.sh`, file `in.txt`)
- 

### (47) Using regular expressions and filters in Linux

#### PROCEDURE:

- 1) Open Linux operating system.
- 2) Login using your ID and password.
- 3) Press Windows (or Alt) key. Type Terminal (which brings terminal into view). Click on Terminal icon to open bash (Bourne Again Shell) in Linux.
- 4) To search for a pattern from file or standard input, use **grep** (Try: `ls | grep wel`, `cat add.sh | grep "Enter"`, `cat welcome.c | grep '$'`, `cat add.sh | grep '^p'`, `grep m *.c`).
- 5) To search for patterns typed in a file, use **fgrep** (Try: `cat - > fl.txt`, main clued in separate lines, `fgrep -f fl.txt welcome.c`).
- 6) To search and replace patterns, use **sed** (Try: `cat add.sh | sed 's/Enter/Input/g'`. This replaces (s - substitute) the word Enter with Input in global scope (g), `cat add.sh | sed '/echo/d'`, `cat add.sh | sed '/read/q'`, `echo add.sh | sed '/read/p'`).
- 7) To process strings which match given pattern, use **awk**. (Try `ls -l | awk '{printf("%s\t%s\n", $9, $5)}'`).
- 8) To learn disk free space levels for each filesystem, use **df** (Try: `du`)
- 9) To learn about disk usage level for each file, use **du**.

- 10) To search for file having particular name, use **find . -name <file>** (Try: `find . -name "*.txt"`, `find . -name "*.txt" -exec wc {} \;`, `find . -name "*.scr" -exec rm -r -f {} \;`)
- 

#### (48) Creating simple shell scripts in Linux

##### PROCEDURE:

- 1) Open Linux operating system.
- 2) Login using your ID and password.
- 3) Press Windows (or Alt) key. Type Terminal (which brings terminal into view). Click on Terminal icon to open bash (Bourne Again Shell) in Linux.
- 4) To create a shell script for adding 2 numbers, type **gedit add.sh**, enter the following code and save the file:

```
#!/bin/sh
echo "Enter x: "
read x
echo "Enter y: "
read y
z=`expr $x + $y`
echo "$x + $y = $z"
```

- 5) To make the script executable, type **chmod 755 add.sh** in the terminal.
- 6) Type **./add.sh** to run the script. Provide the input and verify the result.
- 7) To create a shell script for subtracting 2 numbers, type **gedit sub.sh**, enter the following code and save the file:

```
#!/bin/sh
echo "Enter x: "
read x
echo "Enter y: "
read y
z=`expr $x - $y`
echo "$x - $y = $z"
```

- 8) To make the script executable, type **chmod 755 sub.sh** in the terminal.

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- 9) Type **./sub.sh** to run the script. Provide the input and verify the result.
- 10) To create a shell script for multiplying 2 numbers, type **gedit mult.sh**, enter the following code and save the file:

```
#!/bin/sh
echo "Enter x: "
read x
echo "Enter y: "
read y
z=`echo "scale=3; $x * $y" | bc`
echo "$x * $y = $z"
```

- 11) The command **bc** stands for binary calculator. **Scale** sets the number of significant digits to be displayed in the result.
- 12) To make the script executable, type **chmod 755 mult.sh** in the terminal.
- 13) Type **./mult.sh** to run the script. Provide the input and verify the result.
- 14) To create a shell script for dividing 2 numbers, type **gedit div.sh**, enter the following code and save the file:

```
#!/bin/sh
echo "Enter x: "
read x
echo "Enter y: "
read y
z=`echo "scale=3; $x / $y" | bc`
echo "$x / $y = $z"
```

- 15) To make the script executable, type **chmod 755 div.sh** in the terminal.
- 16) Type **./div.sh** to run the script. Provide the input and verify the result.

---

### (49) Settings in Ubuntu Desktop

#### PROCEDURE:

- 1) Login to Ubuntu Desktop using your ID and Password.

- 2) Open Settings, which is available from the triangle shaped button placed at the right top corner of the Desktop.
- 3) Settings have got the following subsections:
  - a. WiFi: To connect to a WiFi network or to create a WiFi hotspot.
  - b. Network: To setup network connections and VPN (Virtual Private Network).
  - c. Bluetooth: To pair with blue tooth enabled devices like mobile phones and headsets.
  - d. Appearance: To choose theme and to adjust icon sizes.
  - e. Notifications: To control which programs send notifications on the Desktop.
  - f. Search: To control the places at which search takes place.
  - g. Application: It displays a list of application installed in Ubuntu.
  - h. Privacy: To control what type of information is shared with the servers, including geo-location.
  - i. Online Accounts: To setup email accounts and other login details.
  - j. Sharing: To setup how to share the screen with other display devices like projector.
  - k. Sound: To set and volume of speakers and system notification types.
  - l. Power: To choose what happens when display is idle. It also chooses the power usage levels of the system.
  - m. Displays: To set the resolution and colour scheme of monitor
  - n. Mouse and Touchpad: To set the mouse as left handed/ right handed and to choose scrolling methods.
  - o. Keyboard shortcuts: General shortcuts available for Ubuntu Desktop.

- p. Printers: List of printers is displayed. One may choose the default printer, printer preferences and to see what is printing from this setting.
  - q. Region & Language: To select the time zone and typing preferences.
  - r. Universal Access: To enable screen magnifier, onscreen keyboard and other accessibility features.
  - s. Users: To add or remove new users and groups.
  - t. Default Applications: To set the application associated with each
  - u. Date & Time: To set the date and time
  - v. About: To view the operating system version and date of creation.
- 4) Change the Desktop background.
  - 5) Verify the time and change the time if necessary.
  - 6) See the list of printers and the print jobs currently running (if any).
- 

### (50) Creating and running Python scripts in Linux

#### PROCEDURE:

- 1) Open Terminal (Press All Applications. Type Terminal).
- 2) Enter the command **gedit welcome.py** in terminal. Enter the following source code. Save the script.

```
#!/usr/bin/python3
```

```
print("Dear COPA, Welcome to Python!\n")
```

- 3) Type **chmod 755 welcome.py**
- 4) Type **./welcome.py** in terminal. The output is displayed.
- 5) Enter the command **gedit sum.py** in terminal. Type the following source code and save it.

```
#!/usr/bin/python3
```

```
print("Enter a number: ")
```

```
n = input()
```

```
n = int(n)
```

```
sum = 0
```

```

i=1
while(i<=n):
    sum = sum + i
    i = i + 1
print("1+2+...", n, " = ",sum)

```

- 6) Type the command **chmod 755 sum.py** in terminal.
- 7) Type **./sum.py** in terminal. Provide an integer as input (say 12). Verify the result (78).
- 8) Type the command **gedit fact.py**. Type the following source code, save and exit gedit.

```

#!/usr/bin/python3
print("Enter a number: ")
n = input()
n = int(n)
fact = 1
i=1
while(i<=n):
    fact = fact * i
    i = i + 1
print(n,"! = ",fact)

```

- 9) Type the command **chmod 755 fact.py** to convert the python program to executable script.
- 10) Run the program using the command **./fact.py** and provide 10 as input. Verify whether the result is 3628800.
- 11) Type the command **gedit grade.py**. Type the following script and save it:

```

#!/usr/bin/python3
print("Enter mark: ")
m = input()
m = int(m)
if(m>=90):
    print("Passed with distinction")
elif(m>=60):
    print("First class")
elif(m>=35):
    print("Pass")

```

else:

```
print("Fail")
```

- 12) Type the command **chmod 755 grade.py**. Run the script using the command **chmod 755 grade.py**. Provide any mark

## (51) Creating Open Document Format (ODF) document using OpenOffice writer

### PROCEDURE:

- 1) Press Show Applications button in unity launcher.
- 2) Type *writer*. In search box. Click to open OpenOffice writer.
- 3) Choose Format->Page Style from the menu.
- 4) Select Page tab. Set A4 under paper. 1" against all margins.
- 5) Select Footer tab. Place tick mark against Footer on.
- 6) Press Ok and close Page Setup dialog.
- 7) Set 14 points against font size and Right alignment. Type the following content.

Puducherry, dated 11.10.2023

From

<Name>  
COPA trade,  
Govt. ITI for Women,  
Puducherry.

To

The Class Teacher,  
COPA trade,  
Govt. ITI for Women,  
Puducherry.

Sir,

As I was suffering from fever, I could not attend ITI on 10.10.2023. I humbly request you to treat my absence as Casual Leave on 10.10.2023 and permit me to attend regular classes.

- 8) Choose Centre align and type the following content:

Thanking you,

Yours obediently,

(NAME)

- 9) Click at the bottom of the page to add footer. Press Ctrl+E for centre alignment. Choose Insert->Page Number from the menu.
- 10) Press File->Export->Export as PDF. Choose Export to create PDF. Print the PDF file.







## (52) Creating ODF document with table, images and equations

### PROCEDURE:

- 1) Press Show Applications button in unity launcher.
- 2) Type *writer*. In search box. Click to open OpenOffice writer.
- 3) Select Page tab. Set A4 under paper. 1" against all margins.
- 4) Choose Centre alignment, 14 point font size and bold font style. Type the following: **Shapes and Areas**
- 5) Set 14 point size, left alignment (remove bold).
- 6) Choose Table->Insert Table. Set 4 against columns and 2 against rows. Place Tick mark against Heading.

#### Shapes and Areas

Sl. No.	Shape Name	Shape	Area
1	Circle (radius r)		$A = \pi r^2$
2	Rectangle (side a)		$A = a^2$
3	Triangle (sides a, b, c)		$A = \sqrt{(s-a)(s-b)(s-c)}$ Where $s = \frac{a+b+c}{2}$
4	Rectangle (Length L, Breadth B)		$A = L \times B$

- 7) Export the page to PDF using File->Export->Export as PDF. Print the PDF file.

## (53) Creating and saving a Word document

### PROCEDURE:

- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)

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- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab, Set 2.5cm (1") against top margin, 2.5cm (1") against bottom margin, 3cm (1.25") against left margin and 2.5cm (1") against right margin.
- 4) Open Paragraph dialog (shortcut: Alt+H+PG/ Alt+P+PG). Choose 0 pt against Before, 0 pt against After and Single against Line spacing.
- 5) Press centre alignment (Ctrl+E), Bold font (shortcut: Ctrl+B). Set Font size (shortcut: Alt+H+FS) to 14. Type the following sentence:

### **LEAVE LETTER**

- 6) Press Enter key to terminate the line.
- 7) Press Bold (shortcut: Ctrl+B) to reset bold font to normal font, set alignment to Right (shortcut: Ctrl+R) to reset centre alignment and type the following.  
Puducherry, dated 12-Oct-2023
- 8) Set alignment to Justified (shortcut: Ctrl+J) to reset right alignment to justified alignment.
- 9) Type the following content:

From

<name>,  
COPA, (2023-24)  
Govt. ITI for Women,  
Puducherry.

To

The Principal,  
Govt. ITI for Women,  
Puducherry.

Madam,

10) Choose Home->Paragraph (shortcut: Alt+H+PG), set Line Spacing to 1.5 lines (Ctrl+5 for 1.5 line, Ctrl+1 for single line, Ctrl+2 for double line).

11) Type the following content:

As I am suffering from fever, please grant me one day of Casual Leave on 12.10.2023. Medical Certificate for treatment of fever is attached herewith for perusal and acceptance please.

12) Press enter key to end paragraph.

13) Click Centre align (shortcut: Ctrl+E) and type the following:

Thanking you,  
Yours obediently,

**(<NAME>)**

**Encl:** Medical certificate

14) Name should be typed in bold letters.

15) Select the lines containing Yours obediently and name. Press TAB key until the two lines are placed sufficiently to the right side. If an extra TAB has been hit and the sentences break to next line, hit Shift+TAB to bring them to the left.

16) The finished letter should appear as follows:

**LEAVE LETTER**

Puducherry, dated 12-Oct-2023

From

<name>,  
COPA, (2023-24),  
Govt. ITI for Women,  
Puducherry.

To

## **COPA Practical (Half year - 1), VN**

---

The Principal,  
Govt. ITI for Women,  
Puducherry.

Madam,

As I am suffering from fever, please grant me one day  
of Casual Leave on 12.10.2023.

Thanking you,

Yours obediently,

**(<NAME>)**

**Encl:** Medical certificate

- 17) Press File->Save (shortcut: Ctrl+S) to save the document. When File Dialog appears, type **<name>-Ex-53** in the file name box and press Save button.
  - 18) Save the same file in a new name **<name>-Ex-53-copy** using File->Save As. The second file acts like a backup to the original file. The second file may also be used to create a similar letter with some changes.
  - 19) Adjust the – or + symbols shown at bottom right corner to change zoom level.
  - 20) Choose File->Print (shortcut Ctrl+P) to print the file to PDF document. Choose Microsoft Print to PDF as the printer. Press OK button. Provide **<name>-Ex-53** when Microsoft Print to PDF seeks a name. Open the PDF file in Adobe Reader.
  - 21) Marking scheme: Page settings – 10, Paragraph settings – 10, Document – 60, Save – 5, Save As – 5, Adjusting zoom level – 5, Print – 5.
- 

### **(54) Creating Casual Leave Letter and Permission Letter using 2 column paper layout.**

**PROCEDURE:**

- 1) Open MS Word (Windows+R, type “winword” and press Enter).
- 2) Open Page setup dialog (Alt+P+SP).

- 3) Choose A4 size paper, landscape orientation and enter 2.54cm (1") against all 4 margins.
- 4) Choose Layout->Columns->More columns and set 2 columns with 2cm gap.
- 5) Type permission letter on the left column and leave letter on the right column as per the format shown below:

PERMISSION LETTER	CASUAL LEAVE LETTER
1) Name of trainee : <u>Vanitha_G</u> 2) Trade : COPA 3) Date of permission : 11.11.2019 4) Duration of permission : 9AM to 10AM (1 hour) 5) Reason for permission : Going to hospital 6) Signature of trainee : 7) Signature of parent : 8) Signature of V.I. : 9) Signature of G.I. : 10) Signature of Principal :	1) Name of trainee : <u>Vanitha_G</u> 2) Trade : COPA 3) Date of Casual Leave : 09.11.2019 4) No. of days of Casual Leave : 1 day Leave 5) Reason for Casual Leave : Going to hospital 6) Signature of trainee : 7) Signature of parent : 8) Signature of V.I. : 9) Signature of G.I. : 10) Signature of Principal :
Place: Puducherry Date: 11.11.2019	<input style="width: 20px; height: 10px;" type="checkbox"/> Place: Puducherry Date: 11.11.2019

- 6) Print the permission and leave letters.
  - 7) Verify that the format is properly maintained.
- 

## (55) Creating a single page Word document with table and Tamil text

### **PROCEDURE:**

- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)
- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab, Set 1.5cm (0.6") against top margin, 1.5cm (0.6") against bottom margin, 3cm (1.25") against left margin and 2.5cm (1") against right margin.

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- 4) Choose Insert->Shapes->Line. Draw a horizontal line (hold shift key to make it horizontal) just below the top margin. Type the following sentences at font size 16, Font Face to Times New Roman Centre alignment: "NAMES OF PLANTS IN ENGLISH AND TAMIL"
  
- 5) Insert a table by choosing Insert->Table and choose 6 rows and 30 columns (or press Alt+N+T or Alt+a+i+t and choose 6 rows and 30 columns.). Set alignment to Left inside each cell of the table. Choose a design with light fill color from Design menu.

### NAMES OF PLANTS IN ENGLISH AND TAMIL

S. No.	Botanical Name	Common Name in English	Tamil Name	How is it called locally?
1	Abelmoscus esculentus	Lady's finger	bt©il	
2	Acacia coccina	Soap acacia	ÁifífhŪ	
3	Achyranthes aspera		ehÍUé	
4	Anacardium occidentale	Cashew	к²Âç	
5	Anona squamosa	Custard apple	Ójh¥gH«	
6	Artocarpus integrifolia	Jack fruit	Gyh	
7	Bryophyllum		f£o¥ ngh£lhš F£o¥nghL«	
8	Calotropis gigantean	Madar plant	vUiF	
9	Citrus sinensis	Sweet orange	rh«JFo	
10	Cocus nucifera	Coconut	bj«id	
11	Coriandrum sativum	Coriander	bfh«kšè, jáah	
12	Gossypium arboretum	Cotton	gU«Â	
13	Cucumis sativus	Cucumber	btŸšçifhŪ, njhirifhŪ	
14	Cucurbita maxima	Pumpkin	órâifhŪ / guš»ifhŪ/ murhizifhŪ	
15	Cuscuta reflexa	Amar bell	m«ikah® T²jš	
16	Ficus glomerata	Fig	m«Â	
17	Impatiens balsamia	Balsam	ghšr«/ghšbr©L	
18	Lablab purpureus	Bean	mtiu	
19	Lycopersicon esculentum	Tomato	jjfhè	
20	Mangifera Indica	Mango	kh	

21	Mimosa pudica	Touch-me-not plant	bjh£lhš ÁQš»	
22	Mirabilis jalapa	Four o' clock plant	mªÅkªjhiu	
23	Nelumbo nucifera	Indian lotus	jhkiu	
24	Oyza sativa	Paddy/ rice	beš	
25	Pisum sativum	Pea	g£lhâ	
26	Polyalthia longifolia	Mast tree	be£oèšf«	
27	Pyrus malus	Apple	M¥Åÿ	
28	Ricinus communis	Castor	MkziF/KªJi bfh£il	
29	Tridax procumbens		bt£Ljfhª¥ ó©Lcbro	

80

- 6) Choose Insert->Page Number->Bottom of Page->Plain Number 2 (centre aligned). Edit the number and change it to 80.

---

### (56) Creating a single page Word document with images and textboxes

#### PROCEDURE:

- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)
- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab, Set 1.5cm (0.6") against top margin, 1.5cm (0.6") against bottom margin, 3cm (1.25") against left margin and 2.5cm (1") against right margin.
- 4) Choose Insert->Shapes->Line. Draw a horizontal line (hold shift key to make it horizontal) just below the top margin. Type the following sentences at font size 16, justified alignment:

---

3. We are surrounded by smoke. Is this situation good for our health. Give reason.





4. List out the harmful effects of burning coal.

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- 5) Type the following sentence with Centre alignment, set font colour to green, font face to Arial Black, font size to 18:

**Unique Ecosystems of Tamilnadu**

- 6) Insert a table by choosing Insert->Table and choose 2 rows and 2 columns (or press Alt+N+T or Alt+a+i+t and choose 2 rows and 2 columns.). Set alignment to Centre inside each cell of the table.
- 7) Insert the 4 photos given in the pen drive (Choose Insert->Picture (Alt+N+P), select the photo and press Insert). Add captions as shown in the figure. The photos should look as follows:

 <p>Sholas and Grasslands Western Ghats</p>	 <p>Theri Kaadu Mukuperi, Thoothukudi</p>
 <p>Mangrove Forests Pichavaram, Cuddalore</p>	 <p>Neela Kurinji- Plant that blooms once in 12 years - The Nilgris</p>



- 8) Right click on the top left corner of the table. Choose Borders and Shading and set None.
- 9) Insert a rounded rectangle using Insert->Shapes, Rounded Rectangle. Right Click on the rectangle, choose Format AutoShape, set Line to No Color, Fill to light green. Press Ok button. Set Font color to blue (Home panel). Type the following:

**The Sholas and grasslands of the Western Ghats are the sources of all our South Indian rivers. All the hillocks in the**

- 10) Insert another rounded rectangle using Insert->Shapes, Rounded Rectangle. Right click on the rectangle, choose Format Auto shape. Set Line to dark Green colour, Fill to light green colour. Type the following content. Select the words, "Further Reference", set Text Highlight Colour to Green, Text Colour to White. Type the following content:

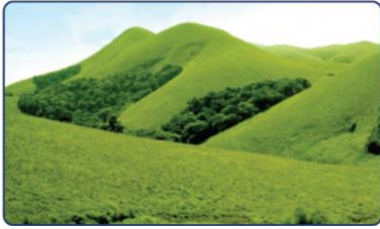
**Further Reference**

**Books: 1. Environmental Studies, Dr.P.J.Sharma, Laxmi publication, New Delhi.**  
**2. Complete Biology (IGCSE), Oxford University press, New York.**

- 11) Choose Insert->Page Number->Bottom of Page->Plain Number 2 (centre aligned). Edit the number and change it to 132.
- 12) Finished page should look like the sample given below:

- 
3. We are surrounded by smoke. Is this situation good for our health. Give reason.
  4. List out the harmful effects of burning coal.

### **Unique Ecosystems of Tamilnadu**



Sholas and Grasslands  
Western Ghats



Theri Kaadu  
Mukuperi, Thoothukudi



Mangrove Forests  
Pichavaram, Cuddalore



Neela Kurinji- Plant that  
blooms once in  
12 years - The Nilgris

**The Sholas and grasslands of the Western Ghats are the sources of all our South Indian rivers. All the hillocks in the upper mountains**

**Further Reference**

- Books:** 1. *Environmental Studies*, **Dr.P.J.Sharma**, Laxmi publication, New Delhi.  
2. *Complete Biology (IGCSE)*, **Oxford University press**. New York.

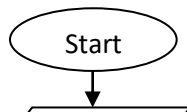
**(57) Creating a flow charts using MS Word**

**PROCEDURE:**

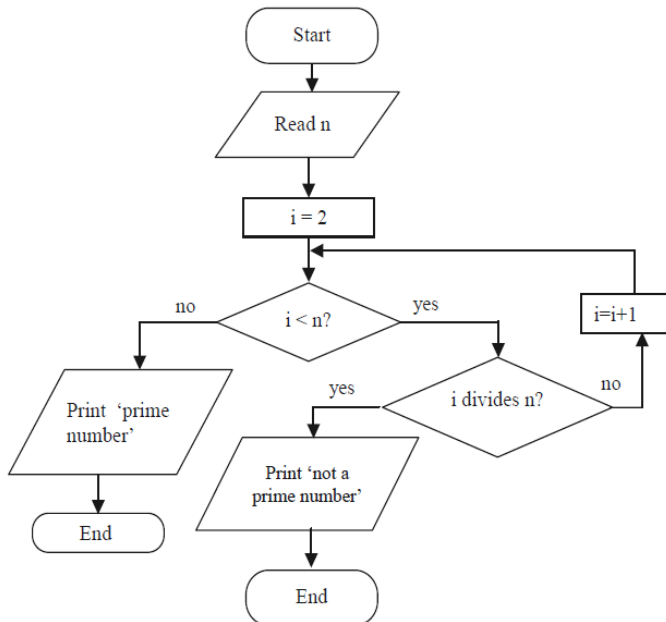
- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)
- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab,

Set 2.0cm (0.8") against top margin, 2cm (0.8") against bottom margin, 2.54cm (1") against left margin and 2cm (0.8") against right margin.

- 4) Flow chart is a collection of Shape objects like ellipse, rectangle, rhombus, circle, etc. interconnected by arrows.
- 5) Choose Insert->Shapes->Ellipse. Draw an ellipse. Right click on the ellipse. Choose **Add text** from the context menu. Type **Start**. Press Ctrl+E to centre the text.



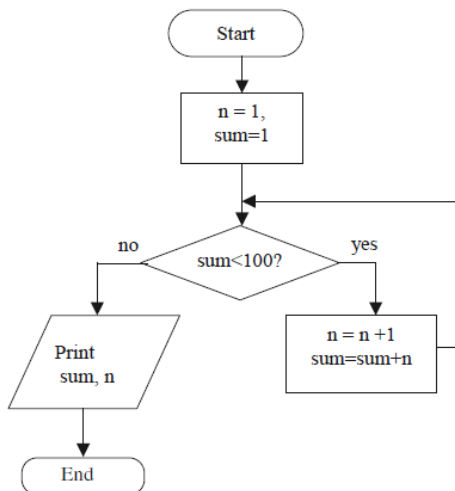
- 6) Choose Insert->Shapes->Flowchart->Input from the menu and place the shape below the start. Right click, choose Add text, type **Read n** and press Ctrl+E to centre the text.



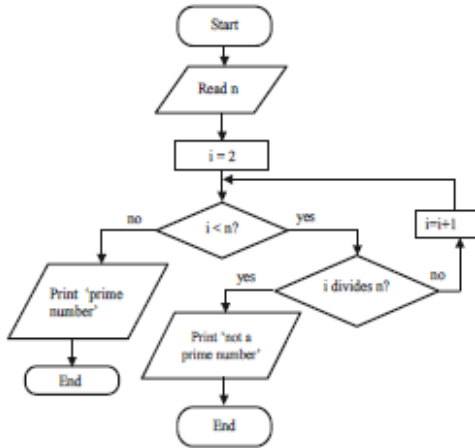
- 7) Draw an arrow to connect the two shapes from Start to Read n.

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- 8) Similarly, continue inserting shapes like Flowchart process, Flowchart Decision, etc., connect them and complete the flow chart as given.
- 9) After completing the flowchart, choose each element of flowchart by holding the **Ctrl** button. Right click on any one element, choose Grouping->Group. This will make the entire flow chart to behave as a single new element. Choose Grouping->Ungroup to break them apart when required.
- 10) Choose Centre alignment (Ctrl+E), Bold font (Ctrl+B) and type **Flow chart 10.9**.
- 11) Type the following sentence in the next line with Justified alignment, 14 point size:  
**Flow chart 10.10 finds the smallest integer n such that,  $1+2+3+\dots+n$  is equal to or just greater than 100.**
- 12) Draw the following flowchart and type **Flow chart 10.10** for its title.
- 13) Group the elements of the second flow chart by selecting each element, right clicking, choosing Grouping->Group.
- 14) Choose Insert->Page Number->Bottom of Page->Bottom Centre and type **290** at the footer.
- 15) Save the document and print the same.

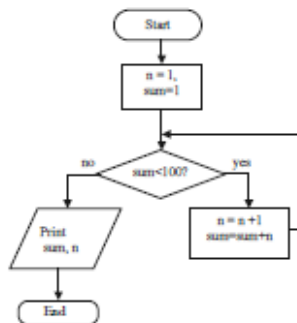


16) The finished document should look like the one given below:



Flow chart 10.9

Flow chart 10.10 finds the smallest integer  $n$  such that  $1 + 2 + 3 + \dots + n$  is equal to or just greater than 1000.



Flow chart 10.10

## (58) Creating a question paper layout using hidden tables

**PROCEDURE:**

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- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)
- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab, Set 2.0cm (0.8") against top margin, 2cm (0.8") against bottom margin, 2.54cm (1") against left margin and 2cm (0.8") against right margin.
- 4) Choose Home->Styles->Heading2 and type the following:

**Choose the best antonyms for the *italicised* words from the options given below:**

- 5) Choose Insert->Table and select 5 columns and 2 rows.
- 6) Select column numbers 2 to 5. Right click, select Merge cells or choose Layout->Merge Cells or press Alt+JL+M or press Alt+A+M. Type the following content:

1.	He cursed himself for his <i>inability</i> to fulfil the condition.			
	a) Inad equa cy	b) Capa city	c) Abilit y	d) since rity

- 7) Leave column 1 of second row empty. Select columns 2 to 5 of the second row, right click and choose Distribute columns or press Alt+JL+UC.
- 8) Type tab from the last column of second row and insert new rows as required. Typeset the following questions:

1.	He cursed himself for his <i>inability</i> to fulfil the condition.			
	a) inad equa cy	b) capa city	c) abilit y	d) since rity
2.	His Pictures were <i>eagerly</i> sought after.			
	a) expe ctant ly	b) enthusi astically	c) differ ently	d) indiff erent ly

- 9) Similarly, typeset the remaining questions as follows:

1.	He cursed himself for his <i>inability</i> to fulfil the condition.			
----	---	--	--	--

	e) inad equ acy	f) capa city	g) abilit y	h) since rity
2.	His Pictures were <i>eagerly</i> sought after.			
	e) exp ecta ntly	f) enthusi astically	g) differ ently	h) indiff erent ly
3.	His expectation was most <i>piteous</i> .			
	a) pat heti c	b) joyo us	c) kind	d) anxio us
4.	Do not tell him any <i>private</i> affairs.			
	a) imp erso nal	b) publi c	c) secre t	d) privil eged
5.	Such men as the Baron are very <i>rare</i> .			
	a) com mon	b) unco mmo n	c) diffic ult	d) dear

10) Place the cursor inside any cell in the table. Right click on the + symbol at top left corner, choose Home->Borders->No Border (Alt+H+B+N) or right click, choose Borders and Shading and select None. The questions now appear as follows:

**Choose the best antonyms for the *italicised* words from the options given below:**

- He cursed himself for his *inability* to fulfil the condition.  
i) inad      j) capa      k) abilit      l) since  
equa      city      y      rity  
cy
- His Pictures were *eagerly* sought after.  
i) expe    j) enthusi    k) differ    l) indiff  
ctant    astically    ently    erent  
ly    ly
- His expectation was most *piteous*.  
e) path      f) joyo      g) kind      h) anxio

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- etic                      us                                      us
4. Do not tell him any *private* affairs.  
e) impe              f) publi              g) secre              h) privil  
rson                      c                      t                      eged  
al
5. Such men as the Baron are very *rare*.  
e) com              f) unco              g) diffc              h) dear  
mon                      mmo                      ult  
n

11) Choose Home->Styles->Heading2, type the following:

### Construct your own sentences using the phrases given below:

- 12) Change the style to Normal and type the following:  
to make matters worse, used to, take up, on account of
- 13) Then type the following fill in the blanks with styles  
Heading2 and Normal as follows:

### Fill in the blanks with the right homophones:

1. The colour of your \_\_\_\_\_ is the same as that of the \_\_\_\_\_. (hair/ hare)
  2. Do you \_\_\_\_\_ the answer? \_\_\_\_\_, I don't. (no/ know)
  3. I can \_\_\_\_\_ the bell from \_\_\_\_\_. (hear/ here)
  4. \_\_\_\_\_ day on earth is measured by the \_\_\_\_\_. (hour/ our)
  5. He wants to \_\_\_\_\_ a flat \_\_\_\_\_ selling his house. (by/ buy)
- 14) Choose the style Heading1, type **Grammar**. Choose style Heading2 and type **Reported-Speech – Revision**. Typeset the following content:

### Grammar

### Reported Speech – Revision

Look at these sentences:

Statements-

- 15) Insert a table with 2 rows and 2 columns, type the following content:



(Direct speech)	“What can I do for you?” the Headmaster asked the boy.
	“I have come to ask you for a scholarship”, the boy said.
(Indirect speech)	The Headmaster asked the boy what he could do for that boy.
	The boy replied that he had come to ask him for a scholarship.

- 16) Right click the table, choose Borders and shading and hide the borders.
- 17) Choose Page Layout->Page Borders (Alt+P+PB). Select Box border.
- 18) Choose Insert->Page Number->Bottom->Plain Number 2 (Alt+N+NU+B). Type **6** at the footer.
- 19) The finished page should look like the one shown below:

Choose the best antonyms for the *italicised* words from the options given below :

1. He cursed himself for his *inability* to fulfil the condition.  
a) inadequacy    b) capacity    c) ability    d) sincerity
2. His pictures were *eagerly* sought after.  
a) expectantly    b) enthusiastically    c) differently    d) indifferently
3. His expression was the most *piteous*.  
a) pathetic    b) joyous    c) kind    d) anxious
4. Do not tell him all my *private* affairs.  
a) impersonal    b) public    c) secret    d) privileged
5. Such men as the Baron are very *rare*.  
a) common    b) uncommon    c) difficult    d) dear

Construct your own sentences using the phrases given below :

*to make matters worse, used to, take up, on account of*

Fill in the blanks with the right homophones :

1. The colour of your.....is the same as that of the ..... (*hair / hare*)
2. Do you ..... the answer? ..... I don't. (*no / know*)
3. I can ..... the bell from ..... (*hear / here*)
4. ....day on earth is measured by the ..... (*hour / our*)
5. He wants to ..... a flat..... selling his house. (*by / buy*)

### Grammar

#### Reported Speech - Revision

Let us recall and revise what we have learnt in Std VIII and IX.

Look at these sentences:

Statements -

(*Direct speech*) "What can I do for you?" the Headmaster asked the boy.

"I have come to ask you for a scholarship", the boy said.

(*Indirect speech*) The Headmaster asked the boy what he could do for him.

The boy replied that he had come to ask him for a scholarship.

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## (59) Typesetting a Tamil page in MS Word

### PROCEDURE:

- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)
- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab, Set 2.54cm (1") against top margin, 2cm (0.8") against bottom margin, 2.54cm (1") against left margin and 2.54cm (1") against right margin.

- 4) Choose Page Layout->Page Borders (Alt+P+PB). Choose Box border. Press Options. Press Options. Choose **Text** in the Measure from option.
- 5) Insert the image (img-51) using Insert->Picture (Alt+N+P). Adjust the image size to fit the paper.
- 6) Click on the image. Choose Format. Adjust the brightness, contrast and colour values as desired. Choose Crop. Remove unwanted portions of the image from bottom part.
- 7) Right Click the picture. Choose Format picture. Choose Line Color on the left panel. Select Solid line on the right panel. Choose Line style from the left panel. Set 2 pt against Width.
- 8) Typeset the given content in Tamil.
- 9) Choose Insert->Page Number->Bottom->Plain Number 2 (Alt+N+NU+B). Enter 64 against page number.
- 10) The finished page should appear like the page given overleaf.



**பொருள் :** சூகன் கூறியதைக் கேட்ட குற்றமற்றவளாகிய இராமன், என் உயிர் போன்றவன் நீ; இலக்குவன் உன் தம்பி; சீதை உன் கொழுந்தி; நீர் சூழ்ந்த இந்த நிலவுலகம் முழுதும் உள்னுடையது. நான் உனது ஆளுகைக்குரியவன்.

**சொற்பொருள் :** அமலன் - குற்றமற்றவன்; நதல் - நெற்றி; இளவல் - தம்பி.

**இலக்கணக் குறிப்பு :** என் னுயிர் - ஆறாம் வேற்றுமைத்தொகை; நன்னுதல் - பண்புத்தொகை; நின்னே - நான்காம் வேற்றுமைத்தொகை.

**பகுபத உறுப்பிலக்கணம் :** நேர்வான் - நேர் + வ் + ஆள். நேர் - பகுதி; வ் - எதிர்கால இடைநிலை; ஆள் - ஆண்பால் வினைமுற்று விசுதி.

14. துன்புள தெனின் அன்றோ கசமுளது அதுவன்றிப்  
பின்புள திடைமன்றும் பிரிவுளதென உன்னேல்  
முன்புளொம் ஒருநால்வேம் முடிவுள தென உன்னா  
அன்புள இனிநாம்ஓர் ஐவர்கள் உளானோம். \*

**பொருள் :** துன்பம் உண்டாயின் அதனையடுத்து இன்பமும் தோன்றுவது இயற்கை. இப்பிரிவு இடைக்காலத்தே; அதனை நினைத்து வருந்த வேண்டா. முன்னர், நான்கள் உடன்பிறந்தோர் நால்வராய் இருந்தோம்; விரிந்த அன்பினால் இனி உன்னொடு ஐவரானோம்.

**சொற்பொருள் :** துன்பு - துன்பம்; உன்னேல் - நினைக்காதே.

## (60) Typesetting equations using MS Word

### PROCEDURE:

- 1) Press Windows+R, type winword and press Enter key (or choose Start->All Apps->Microsoft Office->Microsoft Office Word.)
- 2) MS Word opens with a blank document.
- 3) Open Page Layout->Page Setup (shortcut: Alt+P+SP). Page Setup dialog appears. Choose A4 under Paper tab, Set 2.54cm (1") against top margin, 2.54cm (1") against bottom margin, 3cm (1.18") against left margin and 2cm (0.8") against right margin.

- 4) Insert a textbox at the centre top of page, Type Exercise 7.1, set Centre alignment, bold font, as shown below (Set textbox border to 2pt):

**Exercise 7.1**

- 5) Insert a table with 2 columns. In the first row, type the following sentence:

1.	Determine whether each of the following is an identity or not.

- 6) Place cursor in the second row, second column. Select Layout->Split Cells (Alt+JL+P/ Alt+A+P). Choose 2 columns, 1 row. The cell appears as given below:

1.	Determine whether each of the following is an identity or not.	

- 7) Choose Insert->Equation->Insert new equation (Alt+N+I). Typeset the following equations. Use the Design menu that appears on selecting the equation to typeset the formats required for the equations.

1.	Determine whether each of the following is an identity or not.	
	(i) $\cos^2\theta + \sec^2\theta = 2 + \sin\theta$	(ii) $\cot^2\theta + \cos\theta = \sin^2\theta$

- 8) Now, insert a row below the first one. Select 2<sup>nd</sup> and 3<sup>rd</sup> cells of 3<sup>rd</sup> row. Choose Layout->Merge Cells (Alt+JL+M). Type the following sentence.

1.	Determine whether each of the following is an identity or not.	
	(i) $\cos^2\theta + \sec^2\theta = 2 + \sin\theta$	(ii) $\cot^2\theta + \cos\theta = \sin^2\theta$
2.	Prove the following identities	

- 9) Insert another row at the bottom. Split the cells to 2 columns, 1 row. Type the following equation.

1.	Determine whether each of the following is an identity or not.
----	--

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	(i) $\cos^2\theta + \sec^2\theta = 2 + \sin\theta$	(ii) $\cot^2\theta + \cos\theta = \sin^2\theta$
2.	Prove the following identities	
	(i) $\sec^2\theta + \operatorname{cosec}^2\theta = \sec^2\theta \operatorname{cosec}^2\theta$	(ii) $\frac{\sin\theta}{1-\cos\theta} = \operatorname{cosec}\theta + \cot\theta$

### Exercise 7.1

- Determine whether each of the following is an identity or not.
  - $\cos^2\theta + \sec^2\theta = 2 + \sin\theta$
  - $\cot^2\theta + \cos\theta = \sin^2\theta$
- Prove the following identities
  - $\sec^2\theta + \operatorname{cosec}^2\theta = \sec^2\theta \operatorname{cosec}^2\theta$
  - $\frac{\sin\theta}{1-\cos\theta} = \operatorname{cosec}\theta + \cot\theta$
  - $\sqrt{\frac{1-\sin\theta}{1+\sin\theta}} = \sec\theta - \tan\theta$
  - $\frac{\cos\theta}{\sec\theta - \tan\theta} = 1 + \sin\theta$
  - $\sqrt{\sec^2\theta + \operatorname{cosec}^2\theta} = \tan\theta + \cot\theta$
  - $\frac{1+\cos\theta - \sin^2\theta}{\sin\theta(1+\cos\theta)} = \cot\theta$
  - $\sec\theta(1-\sin\theta)(\sec\theta + \tan\theta) = 1$
  - $\frac{\sin\theta}{\operatorname{cosec}\theta + \cot\theta} = 1 - \cos\theta$
- Prove the following identities.
  - $\frac{\sin(90^\circ - \theta)}{1 + \sin\theta} + \frac{\cos\theta}{1 - \cos(90^\circ - \theta)} = 2\sec\theta$
  - $\frac{\tan\theta}{1 - \cot\theta} + \frac{\cot\theta}{1 - \tan\theta} = 1 + \sec\theta \operatorname{cosec}\theta$
  - $\frac{\sin(90^\circ - \theta)}{1 - \tan\theta} + \frac{\cos(90^\circ - \theta)}{1 - \cot\theta} = \cos\theta + \sin\theta$
  - $\frac{\tan(90^\circ - \theta)}{\operatorname{cosec}\theta + 1} + \frac{\operatorname{cosec}\theta + 1}{\cot\theta} = 2\sec\theta$
  - $\frac{\cot\theta + \operatorname{cosec}\theta - 1}{\cot\theta - \operatorname{cosec}\theta + 1} = \operatorname{cosec}\theta + \cot\theta$
  - $(1 + \cot\theta - \operatorname{cosec}\theta)(1 + \tan\theta + \sec\theta) = 2$
  - $\frac{\sin\theta - \cos\theta + 1}{\sin\theta + \cos\theta - 1} = \frac{1}{\sec\theta - \tan\theta}$
  - $\frac{\tan\theta}{1 - \tan^2\theta} = \frac{\sin\theta \sin(90^\circ - \theta)}{2\sin^2(90^\circ - \theta) - 1}$
  - $\frac{1}{\operatorname{cosec}\theta - \cot\theta} - \frac{1}{\sin\theta} = \frac{1}{\sin\theta} - \frac{1}{\operatorname{cosec}\theta + \cot\theta}$
  - $\frac{\cot^2\theta + \sec^2\theta}{\tan^2\theta + \operatorname{cosec}^2\theta} = (\sin\theta \cos\theta)(\tan\theta + \cot\theta)$
- If  $x = a \sec\theta + b \tan\theta$  and  $y = a \tan\theta + b \sec\theta$ , then prove that  $x^2 - y^2 = a^2 - b^2$ .
- If  $\tan\theta = n \tan\alpha$  and  $\sin\theta = m \sin\alpha$ , then prove that  $\cos^2\theta = \frac{m^2 - 1}{n^2 - 1}$ ,  $n \neq \pm 1$ .
- If  $\sin\theta$ ,  $\cos\theta$  and  $\tan\theta$  are in G.P., then prove that  $\cot^6\theta - \cot^2\theta = 1$ .

- Equation elements are available under Design menu when an equation object is selected.
- Use table with required number of columns.
- After typesetting all the equations, click anywhere inside the table, right click at the plus symbol appearing

at top left corner of table, select Borders and Shading and choose None.

- 4) Choose Insert->Page Number->Bottom->Accent Bar 1 under Page X.
- 5) Page number is displayed at the bottom left of page. Click on page number, choose Design->Page Number->Format Page Number (Alt+JH+NU+F).
- 6) Set start value for numbering at 204.
- 7) Select the page number. Set light orange background colour and white foreground colour for number.
- 8) Select the line and Page. Set light orange foreground colour.
- 9) Delete the text **Page** to the right of page number and type **10<sup>th</sup> Std. Mathematics** there.
- 10) The finished page should look like the one shown overleaf.

### (61) To prepare a birthday invitation using MS Word

ITEM	SPECIFICATION
Paper	A5
Margins	1cm on all sides
Font	Any script type font

#### PROCEDURE

1. Open MS Word.
2. Click Page Layout->Page Setup. Select A5 paper size. Set 1cm as the margin on all 4 sides (top, bottom, left and right). Click Layout->Borders and choose a suitable border & art work. Click Options button and select Text to set “measure from”.
3. In Page Layout menu, press Page Color button. Choose any light colour for page background.
4. Click Water Mark button in Page Layout menu. “Select custom water mark”->Picture water mark->Select picture (Alt+P+PW+W). Choose a suitable picture to function as the background water mark for the page. If

you want the water mark to be light, keep the tick mark Washout button. Otherwise, remove the tick mark before Washout button.

5. Set centre alignment (Ctrl+E or Alt+H+AC). Choose any script font to as per your taste (a font that ends with script or contains the word script in its name resembles handwriting). Set Font Style to Bold (Ctrl+B or Alt+H+1). Set Font Color to red. Set Line spacing to 1.5. Type the following sentence:

*Birthday Party Invitation*

To increase font size dynamically, press Ctrl+Shift+ > (Ctrl+Shift+Greater than). Similarly, to reduce fond size, choose Ctrl+Shift+< (Ctrl+Shift+Less than). 36 point size is suitable for heading of the invitation.

6. Set font color to blue. Reduce font size to 22. Choose a different script font if you wish. Type the following:

*I take immense pleasure in inviting you  
To attend my birthday celebrations*

*On*

*15.03.2021*

*At*

*Banquet Hall, Anandha Inn, Pondicherry  
Birthday Celebration between 5pm and 7.30pm  
and for a*

*Dinner party between 7.30pm & 10pm*

*Kindly bless me on my birthday!*

*-Rufina Lizeth*

7. After typing the above sentences, insert a picture using Insert->Picture menu. Right click the picture, point "Text Wrapping" in the popup menu and click "Behind Text" to send the image behind the text. Resize the image by dragging any of the circles shown in corners or middle of the picture.
8. To type the content required for printing on the cover of the invitation open new page (if already not opened) using Page Layout->Breaks->Page (Alt+P+B+P).



9. Type the following line after setting centre alignment and font size to 36 & font color to red:

*Birthday Party Invitation*

10. Set Font size to 22, font color to blue and type the following content:

To

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

From

*Rufina Lizeth,*

*Saram,*

*Duducherry-605013.*

11. Print the invitation on A5 size paper.
- 

**(62) To prepare sports certificates for 4 trainees of Govt. ITI for Women, with the following specifications:**

Sl. No.	Item	Specification
1	Paper size	A4
2	Orientation	Landscape
3	Margins	1cm on all sides
4	Page border	3 pt wide on all sides
5	Font preference	Script font for body of certificate

List of trainees is shown below:

Name	Trade	Place	Event name
Kamalini	COPA	First	Water filling
Sri	COPA	First	Drawing
Dhanalakshmi	COPA	Second	Essay writing
Harini	COPA	Third	Carrom

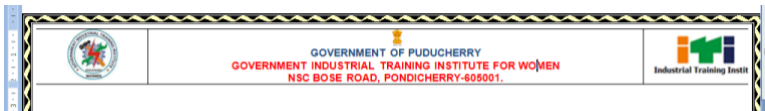
### Procedure

- 1) Open MS Word.
- 2) Choose Page Layout->Page Setup. Set orientation to Landscape, all margins to 1cm and paper size to A4. In the page setup dialog, choose Borders, select *Box*

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setting, set suitable border art, click Options button, set *Text* in the box adjacent to *Measure from* label.

- 3) Insert a table with 1 row and 3 columns using Insert->Table menu.
- 4) On the left side column, insert the logo of Govt. ITI for Women. On the right side column, insert ITI logo. Right click the logo images, choose *Size* from the popup menu, change the height to 2cm each.
- 5) Insert Govt. of India logo at the centre and resize it to 0.7cm height.
- 6) Type the ITI address lines below the Govt. of India logo. Change the colours suitably (blue, red combination is preferable).



- 7) Hide all borderlines of the table.
- 8) Bring the cursor below address line. Set the font colour to blue, font name to Algerian, font size to 36, alignment to centre and type "ANNUAL SPORTS MEET". Press enter to bring the cursor to the next line.
- 9) Set font face to "CommercialScript BT", font size to 48, font colour to red and type "Certificate of Merit".



- 10) Change font size to 22, set colour to blue, keep font face at "CommercialScript BT" and type the following lines with appropriate blank spaces for names.

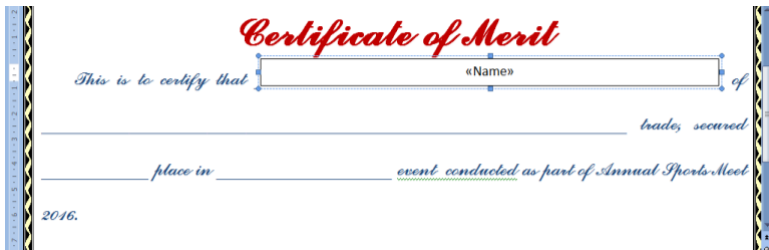
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@

This is to certify that \_\_\_\_\_ of \_\_\_\_\_ trade, secured \_\_\_\_\_ place in \_\_\_\_\_ event conducted as part of Annual Sports Meet 2016.

@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@



- 11) Insert a table with 1 row and 3 columns. After setting font face to "Times New Roman", font size to 16, alignment to "Center", type the name of the Principal on the left column and name of Commissioner on the right column.
- 12) Open MS Excel, type the list shown in question (name20.xlsx).
- 13) Choose Mailings->Select Recipient->Use Existing List and select the name20.xlsx, sheet1.



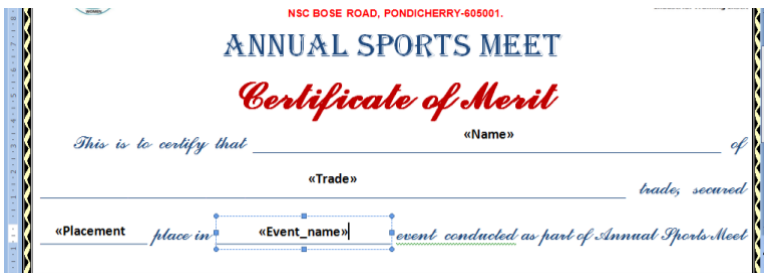
- 14) Insert Text Box from Insert->Shapes menu. Right click the text box, choose Format Text Box, set Fill to No

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color and Line to No color. Click Preview Results button in Mailings menu.



- 15) Copy, paste, resize, delete old merge field and insert new merge field in text boxes at required locations. The merged document should have all empty fields filled up.



- 16) Use preview results to view the mail merge results and “Finish & Merge->Edit Individual Documents” to create new mail merged word document.
- 17) Print the mail merged document.

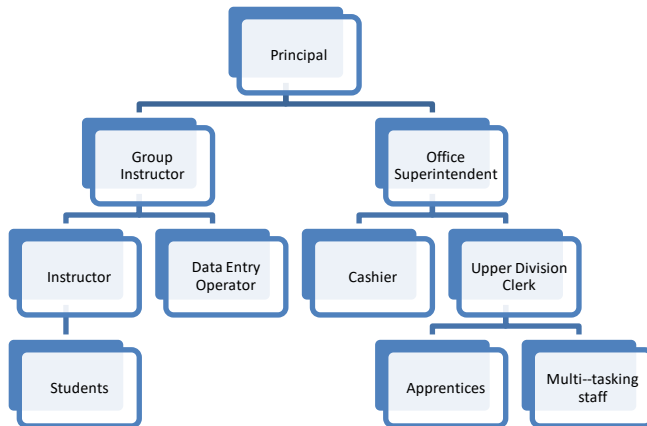
### (63) Prepare hierarchy diagram, process diagram, cycle and relationship diagrams using MS Word.

#### Specifications:

Sl. No.	Item	Specification
1	Paper size	A4
2	Orientation	Portrait
3	Margins	2.5cm on all sides

## Procedure

- 1) Open MS Word.
- 2) Choose Page Layout->Page Setup. Set orientation to Portrait, all margins to 2.5cm and paper size to A4.
- 3) Choose centre alignment.
- 4) Choose Insert->Smart Art. Choose Hierarchy and a suitable design.
- 5) A design window appears.
- 6) Type Principal at the topmost level.
- 7) Use enter key to insert next item.
- 8) Use tab to take the item down in the next level.
- 9) Type Group Instructor. Press enter key and Office Superintendent.
- 10) Under Group Instructor, press enter to create location, tab for child level and type Instructor. Again press enter, tab and type Students. At the level of Instructor, insert Data Entry Operator.
- 11) Similarly, insert Cashier and Upper Division **Clerk** under Office Superintendent.
- 12) Insert **Apprentices** and **Multi-tasking staff** under Upper Division Clerk.
- 13) The finished hieranchy diagram should look similar to the one given below:

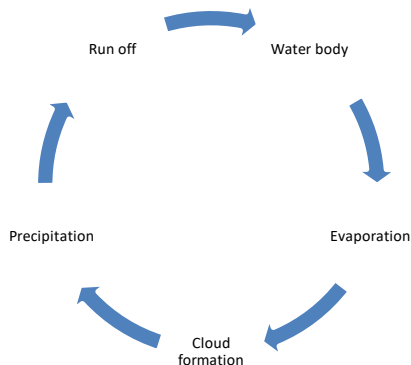


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- 14) Right click the hierarchy diagram, choose Insert caption and type Hierarchy diagram of Govt. ITI for Women, Puducherry.
- 15) Choose Insert->Smart Art->Process from the menu.
- 16) Enter the process flow as follows Admission (preparation of application forms, advertisement), training starts, regular assessment, merit test, All India trade test, Disribution of certificates.
- 17) The finished diagram should look like the following one:

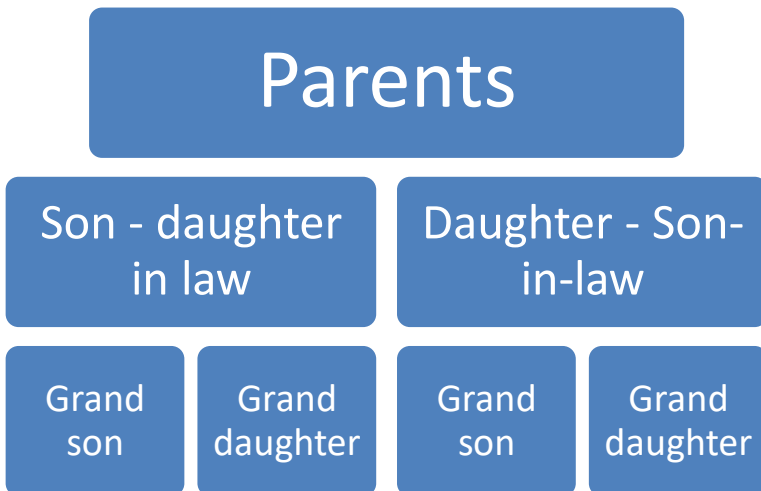


- 18) Right click on the diagram, choose Insert caption and enter Training process.
- 19) Chose Insert->Smart Art->Cycles.
- 20) Enter Water bodies, Evaporation, Cloud formation, Precipitation and Run off against the list of items.
- 21) Right click the diagram, choose Insert caption and type Water cycle.
- 22) The finished diagram should look like the following one:



- 23) Choose Insert->Smart Art->Relationship. Enter a simple family diagram consisting of Parents, Son-daughter-in-law, Daughter-Son-in-law, grand sons and grand daughters on either side.

24) A typical diagram is shown below:



**(64) To prepare letters addressed to different persons using mail merge**

**Specifications:**

Sl. No.	Item	Specification
1	Paper size	A4
2	Orientation	Portrait
3	Margins	2.5cm on all sides

**Procedure**

- 1) Open MS Word.
- 2) Choose Page Layout->Page Setup. Set orientation to Portrait, all margins to 2.5cm and paper size to A4.
- 3) Enter the following text with center alignment and 12 pt font size:

**GOVERNMENT OF PUDUCHERRY  
GOVERNMENT INDUSTRIAL TRAINING INSTITUTE FOR  
WOMEN  
1, NSC BOSE ROAD, VAMBAKEERAPALAYAM, PUDUCHERRY –  
605 001.**

- 4) Enter the following text with right alignment, font size 14 pt:

5) Enter the following text in left alignment:

**To**

6) Leave 5 blank lines and enter the following text for the body portion of letter with justified alignment:

**Sir/Madam,**

**This Institute is planning to purchase 10 desktop computers having Core i7 processor, 16GB RAM and 512MB Solid State Disk (SSD) storage, 19.6"LED monitor, keyboard and mouse. We request you to provide your quotation for desktop computer having the above configuration please.**

7) Finish the letter by creating a signature line as follows:

**(YOUR NAME)**

8) Create a list of recipients using MS Excel as follows:

<b>Name of firm</b>	<b>Address-1</b>	<b>Address-2</b>	<b>Address-3</b>
Swasthik Electronics	Kamaraj Salai	Saram (Near Periyar Statue)	Puducherry - 605001.
Indica Computers	First floor	Needarajapar street	Puducherry - 605001.
Excellent Computer Point	Kamaraj Salai	(Near Raja Theatre signal)	Puducherry - 605001.

- 9) Save the Excel file with the name <name>-ex-74.xlsx.
- 10) Choose Mailings->Select Recipients->Use Existing List (Alt+M+R+E). When the file selection dialog opens, choose the excel file containing the addresses.
- 11) Place cursor at the address line.
- 12) Choose Mailings->Insert Merge Field (Alt+M+I). Insert Name of Firm, Address-1, Address-2 and Address-3 in separate lines.
- 13) Choose Mailings->Preview Results (Alt+M+P) to display the values of merge fields.



- 14) Choose Mailings->Finish & Merge->Print Documents (Alt+M+F+P) to complete the mail merge process. Choose Microsoft Print to PDF against printer and enter a suitable name against the resulting PDF file.

### **(65) Preparing resume using MS Word**

#### **PROCEDURE:**

- 1) Open MS Word (Press Windows+R, type "winword" and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Word from the start menu).
- 2) Set paper size to A4, orientation to Portrait and margins to 2.54cm on all sides.
- 3) Choose Home->Paragraph (Alt+H+PG), select single line spacing and 0 points above and below paragraph.
- 4) Select 14 point size, bold style, centre alignment and type **RESUME**.
- 5) With left alignment, type **Objective**.
- 6) Selecting normal font style and justified alignment type your career objective (Say: "Sustainable progress through technological means.").
- 7) Insert a table with 3 columns. Type Name, Skills, Qualification, Experience, Address, Mobile, Email in the first column.
- 8) Place colon in the second column.
- 9) Enter your details in the third column.
- 10) With centre alignment, type **CERTIFICATE**. Type "I hereby certify that the details furnished above are true to the best of my knowledge and belief."
- 11) Type your name in the signature line.
- 12) Prepare a cover letter with the following content in its body portion:

**Sir/Madam,**

**I am attaching herewith my resume for consideration against suitable vacancies in your esteemed firm please. I shall remain a dutiful servant and render sincere services for growth and development of the organization.**

---

### **(66) Creating Macros with keyboard shortcut using MS Word**

**PROCEDURE:**

- 1) Open MS Word (Windows+R, type “winword” and press Enter).
  - 2) Open File->Trust Centre (Alt+F+I).
  - 3) Select Trust Centre from left panel.
  - 4) Open Trust Centre Settings.
  - 5) Choose Enable All Macros.
  - 6) Under Popular option in left panel, place a tick mark against “Show Developer Tab in the Ribbon”.
  - 7) Choose Developer->Record Macro (Alt+L+R).
  - 8) Enter a name for macro. Choose keyboard. Enter a shortcut combination (e.g., Ctrl+Shift+K, Ctrl+Shift+N, Ctrl+Alt+M, etc.).
  - 9) Press OK. A face icon is shown to indicate that a macro is being recorded.
  - 10) Carry out your work (e.g., type your name).
  - 11) After completing your work, choose Developer->Stop Recording (Alt+L+R).
  - 12) Use your key combinations to verify that the work desired by you is carried out automatically.
- 

### **(67) Creating Macros with button shortcut using MS Word**

**PROCEDURE:**

- 1) Open MS Word (Windows+R, type “winword” and press Enter).
- 2) Open File->Trust Centre (Alt+F+I).
- 3) Select Trust Centre from left panel.
- 4) Open Trust Centre Settings.
- 5) Choose Enable All Macros.
- 6) Under Popular option in left panel, place a tick mark against “Show Developer Tab in the Ribbon”.
- 7) Choose Developer->Record Macro (Alt+L+R).

- 8) Enter a name for macro. Choose Button. Add a separator in the menu customization panel. Add a button. Choose Edit to change its icon.
  - 9) Press OK. A face icon is shown to indicate that a macro is being recorded.
  - 10) Carry out your work (e.g., type your name).
  - 11) After completing your work, choose Developer->Stop Recording (Alt+L+R).
  - 12) Use your key combinations to verify that the work desired by you is carried out automatically.
- 

### **(68) Creating note sheet layout using MS Word.**

#### **PROCEDURE:**

- 1) Open MS Word (Windows+R, type “winword” and press Enter).
  - 2) Open Page setup dialog (Alt+P+SP).
  - 3) Select Legal paper size. Set margins as follows: Top - 2cm, Bottom – 2cm, Left – 8cm, Right – 1.5cm. Select **Mirror** against Multiple pages.
  - 4) Insert the text given to you and format the same with 1.5 line spacing and 14 point Calibri font.
  - 5) Save the document.
  - 6) Print the document by placing appropriate page of note sheet in the tray.
- 

### **(69) Create a magazine page using MS Word**

#### **Specifications:**

Sl. No.	Item	Specification
1	Paper size	A4
2	Orientation	Portrait
3	Margins	1.5cm on all sides

#### **Procedure**

- 1) Open MS Word.
- 2) Choose Page Layout->Page Setup. Set orientation to Portrait, all margins to 1.5cm and paper size to A4.
- 3) Insert the images and place at appropriate locations.

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- 4) Insert textboxes and type required text.
  - 5) Finish the magazine page and convert to PDF.
  - 6) Print the document and verify the layout of the page.
- 

### (70) Prepare identity card for yourself

#### Specifications:

Sl. No.	Item	Specification
1	Paper size	A4
2	Orientation	Portrait
3	Margins	0.5cm on all sides

#### Details to be furnished in the ID card are:

**Front:** Name, trade, duration, Regn. No., NSQF Level

**Rear:** Adhaar, Blood Group, DOB, Phone, Mobile, Address, Valid upto

#### Procedure

- 1) Open MS Word.
- 2) Choose Page Layout->Page Setup. Set orientation to Portrait, all margins to 0.5cm and paper size to A4.
- 3) Insert a table with 1 row and 3 columns using Insert->Table menu.
- 4) Divide the first column to 3 columns and 3 rows using Layout->Split (Alt+JL+P).
- 5) Adjust the width of first column to 9cm, second column to 1cm and third column to 9cm.
- 6) Set the height of row to 1.8cm (5.4cm in total).





- 7) Insert Skill India logo in the left cell, ITI logo in the right cell. Set height to 1cm for both images.
- 8) Insert Govt. of India logo at the centre of page. Set the height to 0.5cm.

- 9) Insert a rounded rectangle. Set the line color to dark blue, weight of 2pt. Add the text “Government of Puducherry\nGovernment ITI for Women\n1, NSC Bose Road, Pondicherry-605001” inside the rounded rectangle.


			
<div style="border: 2px solid darkblue; border-radius: 10px; padding: 5px; text-align: center;"> <small>GOVERNMENT OF PUDUCHERRY INDIAN GOVERNMENT</small>  <b>GOVERNMENT INDUSTRIAL TRAINING INSTITUTE FOR WOMEN</b>  <small>1, NSC, Bose Road, Pondicherry-605001</small> </div>			
<b>TRAINEE IDENTITY CARD</b>			

- 10) Adjust the height of first row to 2cm, second row to 0.5cm and third row to 3cm (total height = 5.5cm).
- 11) Insert table having 4 rows and 4 columns in the last row. Right align the table. Adjust the width to leave 2cm width on the left side.
- 12) Set the font to **Arial Narrow**. Type Name, Trade, Duration, Reg. No. and NSQF level in the table.
- 13) Type **PRINCIPAL** at the right end.

													
<div style="border: 2px solid darkblue; border-radius: 10px; padding: 5px; text-align: center;"> <small>GOVERNMENT OF PUDUCHERRY INDIAN GOVERNMENT</small>  <b>GOVERNMENT INDUSTRIAL TRAINING INSTITUTE FOR WOMEN</b>  <small>1, NSC, Bose Road, Pondicherry-605001</small> </div>													
<b>TRAINEE IDENTITY CARD</b>													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Name</td> <td>: ANJALATCHY R</td> </tr> <tr> <td>Trade</td> <td>: Computer Operator &amp; Programming Assistant</td> </tr> <tr> <td>Duration</td> <td>: Aug-2017 to Jul-2018</td> </tr> <tr> <td>Reg. No.</td> <td>: R170834000116</td> </tr> <tr> <td>NSQF Level</td> <td>: 4</td> </tr> </table>			Name	: ANJALATCHY R	Trade	: Computer Operator & Programming Assistant	Duration	: Aug-2017 to Jul-2018	Reg. No.	: R170834000116	NSQF Level	: 4	
Name	: ANJALATCHY R												
Trade	: Computer Operator & Programming Assistant												
Duration	: Aug-2017 to Jul-2018												
Reg. No.	: R170834000116												
NSQF Level	: 4												
			<b>PRINCIPAL</b>										


- 14) Insert your photo and adjust its width to 2cm at the end of the table.

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Skill India		GOVERNMENT OF PUDUCHERRY LABOUR DEPARTMENT GOVERNMENT INDUSTRIAL TRAINING INSTITUTE FOR WOMEN J, NSQ, Block Road, Pudukkottai-605002			
<b>TRAINEE IDENTITY CARD</b>					
		Name :	ANJALATCHY R		
		Trade :	Computer Operator & Programming Assistant		
		Duration :	Aug-2017 to Jul-2018		
		Reg. No. :	R170834000116		
		NSQF Level :	4		
PRINCIPAL					

15) Set Font name to **Arial Narrow**, font size to 7 points. Choose Home->Paragraph (Alt+H+G). Set Before and After space to 3 pt.

16) On the third column, insert a table with 3 rows and 6 columns. Type Adhaar No., Phone No., Blood Group, Mobile and Date of birth.

Skill India		GOVERNMENT OF PUDUCHERRY LABOUR DEPARTMENT GOVERNMENT INDUSTRIAL TRAINING INSTITUTE FOR WOMEN J, NSQ, Block Road, Pudukkottai-605002		Adhaar No. : 8722 0769 XXXX		Phone No. : 0414-2336437			
		<b>TRAINEE IDENTITY CARD</b> Name : ANJALATCHY R Trade : Computer Operator & Programming Assistant Duration : Aug-2017 to Jul-2018 Reg. No. : R170834000116 NSQF Level : 4		Blood Group : B **		Mobile : 99625 46XXX			
				Date of birth : 19.10.20XX					
PRINCIPAL									

17) Type residential address below the table. Type the text **Valid Upto: 31.07.2018** at the end of the row.

Skill India		GOVERNMENT OF PUDUCHERRY LABOUR DEPARTMENT GOVERNMENT INDUSTRIAL TRAINING INSTITUTE FOR WOMEN J, NSQ, Block Road, Pudukkottai-605002		Adhaar No. : 8722 0769 XXXX		Phone No. : 0414-2336437			
		<b>TRAINEE IDENTITY CARD</b> Name : ANJALATCHY R Trade : Computer Operator & Programming Assistant Duration : Aug-2017 to Jul-2018 Reg. No. : R170834000116 NSQF Level : 4		Blood Group : B **		Mobile : 99625 46XXX			
				Date of birth : 19.10.20XX					
				Residential Address:					
				17, Villupuram Main Road, Thirukkanur, Puducherry – 609 402.					
Valid upto: 31.07.2017									
PRINCIPAL									





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A-102, Bann, Bann, Puducherry-605003

**TRAINEE IDENTITY CARD**

Name : ANJALATCHY R  
Trade : Computer Operator & Programming Assistant  
Duration : Aug-2017 to Jul-2018  
Reg. No. : RT170834000116  
NSQF Level : 4



PRINCIPAL

Adhaar No. : 8722 0789 XXXX Phone No. : 0414-2336437  
Blood Group : B +ve Mobile : 99525 48XXX  
Date of birth : 19.10.20XX

Residential Address:  
17, Villupuram Main Road,  
Thirukkanur,  
Puducherry – 609 402.  
Valid upto: 31.07.2017





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A-102, Bann, Bann, Puducherry-605003

**TRAINEE IDENTITY CARD**

Name : ANJALATCHY R  
Trade : Computer Operator & Programming Assistant  
Duration : Aug-2017 to Jul-2018  
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PRINCIPAL

Adhaar No. : 8722 0789 XXXX Phone No. : 0414-2336437  
Blood Group : B +ve Mobile : 99525 48XXX  
Date of birth : 19.10.20XX

Residential Address:  
17, Villupuram Main Road,  
Thirukkanur,  
Puducherry – 609 402.  
Valid upto: 31.07.2017

18) Hide the border for the main table, the Name table in the first column and Adhaar table in the third column. The card looks like the one shown below:





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A-102, Bann, Bann, Puducherry-605003

**TRAINEE IDENTITY CARD**

Name : ANJALATCHY R  
Trade : Computer Operator & Programming Assistant  
Duration : Aug-2017 to Jul-2018  
Reg. No. : RT170834000116  
NSQF Level : 4



PRINCIPAL

Adhaar No. : 8722 0789 XXXX Phone No. : 0414-2336437  
Blood Group : B +ve Mobile : 99525 48XXX  
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Residential Address:  
17, Villupuram Main Road,  
Thirukkanur,  
Puducherry – 609 402.  
Valid upto: 31.07.2017

## **COPA Practical (Half year - 1), VN**

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- 19) Copy the larger table by clicking at the + mark appearing in the top left corner.
- 20) Press Enter key below the table to insert 1 or 2 blank lines.
- 21) Paste the table.
- 22) Repeat steps 20 and 21 until the entire page is filled up.
- 23) Edit the new tables and insert details of 3 other persons in the table.
- 24) Finished layout of ID cards is shown overleaf.
- 25)
- 26) Paste the table.
- 27) Repeat steps 20 and 21 until the entire page is filled up.
- 28) Edit the new tables and insert details of 3 other persons in the table.
- 29) Finished layout of ID cards is shown overleaf.

---

### **(71) Prepare a book entitled the Legends of Krishna**

#### **Specifications:**

Sl. No.	Item	Specification
1	Paper size	A5
2	Orientation	Portrait
3	Margins	1.3cm on left side, 1cm on all other sides.

#### **Procedure**

- 1) Open MS Word.
- 2) Choose Page Layout->Page Setup. Set orientation to Portrait, all margins to 1cm, left margin to 1.3cm and paper size to A5.
- 3) Insert header and footer for first page.
- 4) Keeping cursor in the header, open Design menu. Place a tick mark against Different Odd and Even pages.
- 5) Set the headers and footers. Define lowercase Roman numbers for page numbering.
- 6) Define styles for Normal (Calibri 14, double line spacing, justified, 1.25cm indent for first line), Heading 1 (Calibri



18 points, bold centre align, numbering), Heading 2 (Calibri 16, bold, justified).

- 7) Create a title page.
- 8) Insert page break. Insert copyright information, publishing date and price of book.
- 9) Insert new page. Choose References->Table of Contents and insert a blank table of contents.
- 10) Insert new page. Choose References->Insert Table of Figures.
- 11) Choose Layout->Breaks->Odd Page break. Define normal numbering style for each new chapter.
- 12) Type the contents. Insert the figures, right click and choose Insert Caption to display caption for figures.
- 13) Make index entries by selecting words and choosing mark all.
- 14) Insert index page.
- 15) Update Table of contents, list of figures and index.
- 16) Convert the content to PDF. Print using booklet layout in Adobe Reader.

## **(72) Creating cover page for Legends of Krishna book document**

### **PROCEDURE:**

- 1) Open MS Word (Windows+R, type "winword" and press Enter).
  - 2) Open Page setup dialog (Alt+P+SP).
  - 3) Select A4 paper size and landscape. Set 0.5cm margin on all sides.
  - 4) Choose Insert->Table. Insert a table with 3 columns. Set column widths to 14cm, 0.5cm and 14cm.
  - 5) Type author details in column 1.
  - 6) Type book name and author name in column 2 (text direction upwards using layout menu of table).
  - 7) Type book title, author name and publisher details in column 3. Insert cover photo also in the third column.
  - 8) Print the document.
  - 9) Paste the cover page on the book.
-

**(73) To create a spreadsheet containing marks and analyse the data using MS Excel**

**PROCEDURE:**

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Right click on Sheet1. Rename it to "Mark".
- 3) In the spreadsheet, columns are named A, B, C, ..., Z, AA, ... ZZ in alphabets and rows are named 1, 2, 3, ... in numbers.
- 4) The address of a cell is a combination of column name and row number. Hence, the first cell is called A1, the next cell on the same row is called B1, the cell just below the first cell is called A2.
- 5) Type **Sl. No.**, **Name**, **Mark** and **Rank** in cells A1, B1, C1 and D1.
- 6) Enter 1 in cell A2. Type **=A2+1** in cell A3. The next number appears.
- 7) Click on or move the cursor to cell A2. Press Ctrl+C (copy).
- 8) Move the cursor down. Press Shift Key and keep pressing down arrow till the cells A4 to A11 are selected. Press Ctrl+V (or Enter key) to create automatic numbers.
- 9) Enter names of any 10 persons in cells B2 to B11.
- 10) Enter marks in cells C2 to C11.
- 11) Enter the following formula in cell D2: **=rank(C2, C\$2, C\$11)**. It displays the rank of the first student in relation to 9 other students.
- 12) Copy the formula from cell D2 to cells D3:D11 range. Rank for each student is displayed.
- 13) Select the header row and make the text bold.
- 14) Adjust column width to suit the length of name.
- 15) Select the area filled with Data. Choose Home->Borders->All Borders (or press Alt+H+B+A).
- 16) Save the document with password using Tools->General Options available in the file save dialog.

- 17) Open Page Layout->Page Setup. Set 1 Page wide by 1 page high.
  - 18) Select Margins, place tick mark against Center on Page->Horizontally.
  - 19) Select Header/Footer, Click Custom Header and type "Statement of Marks: COPA" at centre. Set Bold font with 16 point size.
  - 20) At the end of the book, use Average, stdev, Max, Min and Mode formulae to calculate statistical parameters.
  - 21) Select Custom Footer. Insert Page number using # symbol at centre. Insert your name to the right side.
  - 22) Print the document.
  - 23) Choose Formulas->Show Formulas. Print the same document again to show all the formulas.
- 

#### **(74) Using Date function and randbetween to create data**

##### **PROCEDURE:**

- 24) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
  - 25) Enter the values **Sl. No., Name, DOB, Percentage Mark** in cells A1, B1, C1 and D1.
  - 26) Select cells A1:D1, choose bold font, select Home->Wrap Text, align centre vertically and align centre horizontally.
  - 27) Enter the value 1 in cell A2.
  - 28) Type the formula **=A2+1** in cell A3.
  - 29) Copy the contents of cell A3 and paste it in the range A4:A11.
  - 30) Type the names of 10 persons.
  - 31) Enter date of birth using the function **=date(year, month, day)** format in cells C2 to C11.
  - 32) Enter the formula **=randbetween(75,100)** in cells D2 to D11.
-

**(75) To use conditional formatting in Excel cells to highlight cells**

**PROCEDURE:**

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Copy the raw data from Sheet1. Paste the values in Sheet2.
- 3) Rename Sheet2 to Conditional-Format.
- 4) Select cells D2:D11. Choose Home->Conditional Formatting->Top and Bottom->Top 10 (Alt+H+L+T+T). Select top 3, set colour scheme. Press OK to apply conditional formatting.
- 5) Select cells C2:C11. Choose Home->Conditional Formatting->Top and Bottom->Top 10 (Alt+H+L+T+T). Select top 2, set colour scheme. Press OK to apply conditional formatting for selecting 2 oldest persons. Apply the same procedure to for selecting youngest 2 persons.

---

**(76) Sorting data using Excel.**

**PROCEDURE:**

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 6) Copy the raw data from Sheet2. Paste the values in Sheet3.
- 7) Rename Sheet3 to Sorted.
- 8) Select cells B1:D11.
- 2) Select Data->Sort.
- 3) In the sort dialog, ensure that the box in front of *My Data has header* is ticked.
- 4) Choose Percentage of Marks->Largest to Smallest.
- 5) Press Add Level.
- 6) In the second level, choose DOB->Oldest to youngest.
- 7) Press Add Level.
- 8) In the third level, choose Name->A to Z.
- 9) Press OK.

### (77) Applying filter for data in Excel.

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
  - 2) Copy the raw data from Sheet3. Paste the values in Sheet4.
  - 3) Rename Sheet4 to Filtered.
  - 4) Select cells B1:D11.
  - 5) Choose Data->Filter (Alt+A+T).
  - 6) A triangle mark appears at each column heading.
  - 7) Click the triangular mark and choose the sorting options.
  - 8) Verify that the data is properly sorted based on given criterion.
- 

### (78) Creating pie chart, column chart and bar chart using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the values **Trade, No. of Trainees** in cells A1, B1. Select the cells, centre the content, apply bold face font, select Text Wrap from Home screen.
- 3) Enter the following data in cells A2:B8:

COPA	24
Cosmetology	24
Electronics Mechanic	12
Sewing Technology	20
Solar Technician	20

- 4) Select the data in cells A1:B8. Choose Insert->Pie. Select 3D pie chart.
- 5) Right click on the boundary of the pie chart, select Format Data Labels. Place a tick mark against **Values** in the dialog and press OK.

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- 6) Select the data in cells A1:B8. Choose Insert->Column. Select Cone (or any other type).
  - 7) Right click on the data bars, select Add Data Labels.
  - 8) Right click again. Choose Format Data Series. In the resulting dialog, choose Fill. Place a tick mark against **Vary colors by point**.
  - 9) Select the data in cells A1:B8. Choose Insert->Bar. Select Cone (or any other type).
  - 10) Right click on the data bars, select Add Data Labels.
  - 11) Right click again. Choose Format Data Series. In the resulting dialog, choose Fill. Place a tick mark against **Vary colors by point**.
  - 12) Open MS Word. Choose centre alignment.
  - 13) Copy pie chart from MS Excel. Paste it in MS Word. Add the title **Pie chart** at the bottom of the graph.
  - 14) Copy column chart from MS Excel. Paste it in MS Word. Add the title **Column chart** at the bottom of the graph.
  - 15) Copy bar chart from MS Excel. Paste it in MS Word. Add the title **Bar chart** at the bottom of the graph.
  - 16) Arrange all 3 charts in a single page (resize the charts if necessary) and print the charts.
- 

### (79) Creating line chart using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the data:

Date	BSE Closing
03-Oct-23	65512.10
04-Oct-23	65226.04
05-Oct-23	65631.57
06-Oct-23	65995.63
09-Oct-23	65512.39
10-Oct-23	66079.36

11-Oct-23	66473.05
12-Oct-23	66408.39
13-Oct-23	66282.74
16-Oct-23	66166.93
17-Oct-23	66428.09
18-Oct-23	65877.02
19-Oct-23	65629.24
20-Oct-23	65397.62
23-Oct-23	64571.88
25-Oct-23	64049.06
26-Oct-23	63148.15
27-Oct-23	63782.80
30-Oct-23	64112.65
31-Oct-23	63874.93

- 3) Select the data. Choose Insert->Line and select suitable line.
  - 4) Widen the graph to make all dates visible.
  - 5) Right click the data series and choose Format Data Label. Place a tick mark against values.
  - 6) Click on the chart. Choose Page Layout. Ensure that Landscape format is selected.
  - 7) Print the chart from MS Excel.
- 

### **(80) Creating series of lines using scatter diagram in MS Excel**

#### **PROCEDURE:**

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the titles **Angle, Sin, Cos** in cells A1, B1,C1.
- 3) Enter **0** in cell A2, **=SIN(A2\*PI()/180)** in B2 and **=COS(A2\*PI()/180)** in C2.
- 4) Enter **=A2+0.5** in cell A3, **=SIN(A2\*PI()/180)** in B3 and **=COS(A2\*PI()/180)** in C3.

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- 5) Copy the cells A3, B3, C3 and paste them from row 4 to row 2001.
  - 6) Select the data. Choose Insert->Scatter.
  - 7) Increase the width of chart to make the graphs easily visible.
  - 8) Click on the graph, choose Page Layout and apply landscape format.
  - 9) Print the graph.
- 

### (81) Creating Point of Sale bill form using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Open Sheet2. Rename the sheet to Data. Enter the following values in Cells A1:C5:

Sl. No.	Name of item	Rate
1	Vennila	45
2	Casetta	36
3	Chocolate	60
4	Pineapple	40

- 3) Choose Sheet1.
- 4) Select Page Layout->Page Layout (Alt+P+SP). Select A5 paper size. Set Custom Header of "Cool kids ice cream parlour, 1 NSC Bose Road, Pondicherry-605001." Set custom footer of "Ice cream once sold melts away. Do not return it! Eat it!!".
- 5) Enter the following values in cells A1:E3:

Bill No.	1		Date:	08-12-2017
Name & address of customer:				
Mobile:				

- 6) Enter the following values in cells A4:E4 (Apply bold font, centre alignment and text wrap, apply Home->Borders->All Borders):

Sl.	Name of item	Qty.	Rate	Amount
-----	--------------	------	------	--------



No.				
-----	--	--	--	--

- 7) Select View->Page Break Preview.
- 8) Set Fit to 1 Pages Wide by 1 Pages Tall.
- 9) In cell A5, enter the formula **=IF(isblank(B5),"", row(B5)-4)**.
- 10) Select cell B5. Choose Data->Data Validation. Select List against Allow. Enter **=Data!\$B\$2:\$C\$11**. Press OK. A triangle appears next to the cell to input item name.
- 11) At cell D5, enter the formula **=IFERROR(VLOOKUP(B5,Data!\$B\$2:\$C\$5,2),"")**. This formula looks up the name of the item selected in column B and fills the available rate from Data sheet to column D.
- 12) At cell E5, enter the formula **=IFERROR(C5\*D5,"")** to calculate the amount.
- 13) At the bottom of page, type cashier.
- 14) Leaving a gap of 7 rows above the Cashier row, type the following content:

	Value of Goods			<b>=SUM(E5:E22)</b>
	CGST @ 6%			<b>=ROUND(E23*6/100,0)</b>
	SGST @ 6%			<b>=ROUND(E23*6/100,0)</b>
	<b>Total - including GST</b>			<b>=SUM(E23:E25)</b>

- 15) Select the column from A5 to E26. Choose Home->Borders->More Borders (Alt+H+B+M). Choose all vertical borders and the bottom border.

## (82) Creating monthly GST report for shops

### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Merge the cells A1 and B1. Enter **Total amount** in the merged cells.
- 3) Enter the formula **=SUM(C3:C1002)** in C1, **=SUM(D3:D1002)** in D1, **=SUM(E3:E1002)** in E1 and **=SUM(F3:F1002)** in F1.
- 4) Enter the following column names in cells A2 to F2:

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Bill No.	Date	Cost of items	CGST @ 6%	SGST @ 6%	Total cost
----------	------	---------------	-----------	-----------	------------

5) Enter the following formulae from cells D2 to F2.

C	D	E	F
=SUM(C3:C100)	=SUM(D3:D100)	=SUM(E3:E100)	=SUM(F3:F1002)
Cost of items	CGST @ 6%	SGST @ 6%	Total cost
2489	=ROUND(C3*6/100,0)	=ROUND(C3*6/100,0)	=SUM(C3:E3)

- 6) Copy and paste the formulae from cells D2:F2. Paste the same from cells D3:F3 to D1002:F1002.
- 7) Select cells from C2:C1002. Open Data->Conditional Formatting. Choose Date, between 01-04-2019 and 30-04-2019.
- 8) Select cells A1:F2. Choose View->Freeze Panes->Freeze top rows.
- 9) Format the cells A1:F1 with bold font and 14 point size.
- 10) Enter some bill numbers, date, item cost and verify whether CGST, SGST and total amount are calculated properly.
- 11) Print the result on A4 size paper with appropriate header and footer.

### (83) Working with Strings using MS Excel

#### PROCEDURE:

- 12) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 13) Enter Name, <Your name> in cells A1 and B1.
- 14) Enter **Length**, =LEN(B1) in cells A2, B2.
- 15) Enter **Left 4**, =LEFT(B1,4) in cells A3, B3.
- 16) Enter **Right 4**, =RIGHT(B1,4) in cells A4, B4.
- 17) Enter **Conc.**, =CONCATENATE("Hi",char(10),B1) in cells A5, B5.
- 18) Enter **Proper**, =PROPER(B1) in cells A6, B6.
- 19) Enter **Upper**, =UPPER(B1) in cells A7, B7.
- 20) Enter **Lower**, =Lower(B1) in cells A8, B8.
- 21) The complete table should look like the one shown below:

Name	Nagaradjane
Length	=LEN(B1)
Left 4	=LEFT(B1,4)
Right 4	=RIGHT(B1,4)
Conc.	=CONCATENATE("Hi", CHAR(10),B1)
Proper	=PROPER(B1)
Upper	=UPPER(B1)
Lower	=LOWER(B1)

- 22) Print the values and formulae in A5 paper.
- 

### (84) Working with date in MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the following values in cells A1 to G1:

Sl. No.	Name	DOB	Days passed since	age in years	age in months	Whether eligible to vote
---------	------	-----	-------------------	--------------	---------------	--------------------------

### COPA Practical (Half year - 1), VN

			birth			
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- 3) Enter the following formulae in cells D2 to G2: D2: **=days360(C2,today())**, E2: **=rounddown(yearfrac(C2,today()), 0)** F2: **=round(yearfrac(C2,today())\*12,0)**, G2: **=IF(E2<18,"No", "Yes")**.
  - 4) Enter Serial number, name and date of birth in cells A2:C2 to see the formulae working.
  - 5) Fill at least 10 rows with names known to you.
  - 6) Set all borders using Home->Border->All Border (Alt+H+B+A).
  - 7) Select View->Page Break Preview.
  - 8) Set Fit to 1 Pages Wide by 1 Pages Tall.
  - 9) Print the document.
- 

### (85) Creating account transaction entries using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
  - 2) Enter the values Date, Description, Debit, Credit, Balance in cells A1 to E1. Apply centre alignment, bold font and Wrap Text styles.
  - 3) Enter the formula =D2-C2 in cell E2.
  - 4) Enter the formula =E2+D3-C3 in cell E3.
  - 5) Copy the formula from E3 to cells E4:E11.
  - 6) Enter date, transaction remark, whether amount is credited or debited to see the balance amount changing automatically.
  - 7) Print the values and formulae in A5 paper.
- 

### (86) Creating income, expense entries using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
  - 2) Select Sheet1.
  - 3) Enter the values Date, Head of account, Expense, Income, Cash at Hand in cells A1 to E1. Apply centre alignment, bold font and Wrap Text styles.
  - 4) Enter the formula =D2-C2 in cell E2.
  - 5) Enter the formula =E2+D3-C3 in cell E3.
  - 6) Copy the formula from E3 to cells E4:E11.
  - 7) Enter date, transaction remark, whether amount is income or expense to see the cash at hand changing automatically.
  - 8) Select Sheet2. Rename it to Summary.
  - 9) Enter **Head of account, Total Expense, Total Income, Summary** in cells A1:D1.
  - 10) Enter the head of account (Home, School, etc.) in column A.
  - 11) Enter the formulae =SUMIF(Sheet1!\$B\$2:\$B\$11,A2,Sheet1!\$C\$2:\$C\$11), =SUMIF(Sheet1!\$B\$2:\$B\$11,A2,Sheet1!\$D\$2:\$D\$11) and =C2-B2 in cells B2:D2.
  - 12) Enter different heads of account in column A.
  - 13) Copy formulae from cells B2:D2 down the rows to get summary values.
  - 14) Print the values and formulae in A5 paper.
- 

### (87) Creating pivot table and pivot chart using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the following transaction entries in cells A1:E10:

Date	Head of Account	Expense	Income	Balance
01-12-2022	Salary		10,000	10,000
01-12-2022	Home	900		9,100

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02-12-2022	Home	150		8,950
02-12-2022	School	100		8,850
02-12-2022	Hospital	600		8,250
03-12-2022	Rent		5,000	13,250
04-12-2022	Home	500		12,750
05-12-2022	Home	800		11,950
06-12-2022	Shopping	3200		8,750

- 3) Select cells A1:E10.
- 4) Choose Insert->Pivot Table->Pivot Table (Alt+N+V+T).
- 5) When the pivot table dialog appears, verify that the cell range is correct and New Worksheet is selected.
- 6) On pressing OK button in the dialog, a new sheet is inserted.
- 7) Place a tick mark against the columns for summarizing.
- 8) A summary report appears.
- 9) Select cells A1:D10.
- 10) Choose Insert->Pivot Table->Pivot Chart (Alt+N+V+C).
- 11) When the pivot chart dialog appears, verify that the cell range is correct and New Worksheet is selected.
- 12) On pressing OK button in the dialog, a new sheet is inserted.
- 13) Place a tick mark against the columns for summarizing.
- 14) A summary chart appears.
- 15) Print both pivot table and pivot chart in A5 sheet with the header **Pivot Table/ Pivot Chart** and footer containing your name on the right side.

---

### (88) Data validation using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the values Sl. No., Name and DOB in cells A1 to C1. Apply centre alignment, bold font and Wrap Text styles.
- 3) Select cells A2:A11.

- 4) Choose Data->Data Validation->Data Validation (Alt+A+V+V).
  - 5) Select Whole Number. Choose a validation criterion (between). Enter values for validation (start: 1 end: 10). Click Input. Enter Heading (Number required). Enter a message (Number between 1 and 10).
  - 6) Select cells B2:B11.
  - 7) Choose Data->Data Validation->Data Validation (Alt+A+V+V).
  - 8) Select Text Length. Choose a validation criterion (between). Enter values for validation (start: 1 end: 4). Click Input. Enter Heading (Text input). Enter a message (Text length between 1 and 4 characters).
  - 9) Select cells C2:C11.
  - 10) Choose Data->Data Validation->Data Validation (Alt+A+V+V).
  - 11) Select Date. Choose a validation criterion (between). Enter values for validation (start: 01-01-1917 end: 31-07-2002). Click Input. Enter Heading (Date input). Enter a message (Date value between 01-01-1917 and 31-07-2002).
  - 12) Deliberately enter wrong data in the fields (20 in A2, <your name> in B2 and 23-09-2003 in C2). Verify that wrong input is greeted by an error message
- 

### **(89) Managing scenarios through What If Analysis using MS Excel**

**PROCEDURE:**

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the following transaction entries in cells A1:E10:

<b>Date</b>	<b>Head of Account</b>	<b>Expense</b>	<b>Income</b>	<b>Balance</b>
01-12-2022	Salary		10,000	10,000
01-12-2022	Home	900		9,100
02-12-2022	Home	150		8,950
02-12-2022	School	100		8,850

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02-12-2022	Hospital	600		8,250
03-12-2022	Rent		5,000	13,250
04-12-2022	Home	500		12,750
05-12-2022	Home	800		11,950
06-12-2022	Shopping	3200		8,750

- 3) The aim of this analysis is to create 3 scenes: Scene1 with salary of 10,000, Scene2 with salary of 7,000 and Scene3 with salary of 5,000.
  - 4) Choose Data->What If Analysis->Scenario Manager (Alt+A+W+S).
  - 5) In the Scenario Manager dialog, click Add.
  - 6) Enter Scene 1, Set the changing cell to D2 (Income from salary). Press OK.
  - 7) Enter 10,000 in the box to represent Scene1.
  - 8) Follow steps 4 to 6 to create Scene2 and Scene3. Enter 7,000 for Scene2 and 5,000 for Scene3.
  - 9) Choose Scenario Manager. Select a scene. Press Show button. The scene changes and the results are recalculated based on the new scenario.
  - 10) Scenario is used to estimate the impact of changing situations on the outcome of a business.
- 

### (90) Goal Seek using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Goal seek helps to find an input which will yield desired output results.
- 3) As a sample case, enter 12 in A1, 5 in B1 and =10\*A1+B1 in C1.
- 4) Choose Data->What If Analysis->Goal Seek (Alt+A+W+G).
- 5) Enter C1 in Set cell, 400 (desired result) in To value and A1 in By changing cell.
- 6) Press OK.



- 7) Excel calculates the value to be placed in A1 to obtain 400 as the result.
- 8) Press OK to accept the result or Cancel to reject the result.

**(91) Creating Single input data table to calculate profit after rebate using MS Excel**

**PROCEDURE:**

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Data table calculates large number of results based on a model calculation.
- 3) Enter **Input values, Sales rate of cloth, Purchase rate of cloth, Percentage rebate, Profit** in cells A1 to A5. Enter **200, 150, 10%, =B2\*(1-B4)-B3** in cells B2 to B5 (Cell B4 should be formatted to Percentage). Input data looks like this:

**Input data**

Sales rate of cloth	200
Purchase rate of cloth	150
Rebate %	10.00%
Profit	=B2*(1-B4)-B3

- 4) To create a column based Data table, format cells A9:A12 to percentage and fill the following values in cells A7 to B12:

**Column based Data Table**

	=B5
5.00%	
10.00%	
15.00%	
20.00%	

- 5) The aim is to automatically calculate the results for cells B9:B12.
- 6) Select cells A8:B12. Choose Data->What If Analysis->Data Table (Alt+A+W+T).

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- 7) Enter \$B\$4 as the column input value. Leave Row input blank. Press Ok.
- 8) You will find that All the values are calculated the results displayed as shown below:

**Column based Data Table**

	30
5.00%	40
10.00%	30
15.00%	20
20.00%	10

- 9) Similarly, enter the following values in cells A14:E16:

**Row based Data Table**

	5.00%	10.00%	15.00%	20.00%
=B5				

- 10) Select cells A15:E16. Choose Data->What If Analysis->Data Table (Alt+A+W+T).
- 11) Enter \$B\$4 in the Row input. Leave column input blank. Press OK and verify that you get the following result:

	5.00%	10.00%	15.00%	20.00%
30	40	30	20	10

- 12) Print the sheet in A5 size paper with the header **Data table in Excel.**

### (92) Creating row and column based Data Tables using MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type "excel" and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Data table calculates large number of results based on a model calculation.
- 3) Enter **Input values, Sales rate of cloth, Purchase rate of cloth, Percentage rebate, Profit** in cells A1 to A5. Enter **200, 150, 10%, =B2\*(1-B4)-B3** in cells B2 to B5 (Cell B4 should be formatted to Percentage). Input data looks like this:

**Input data**

Sales rate of cloth	200
Purchase rate of cloth	150
Rebate %	10.00%
Profit	=B2*(1-B4)-B3

4) Enter the following values in cells A7:I14.

<b>Row and column based Data Table</b>									
=B5	180	190	200	210	220	230	240	150	
5.00%									
10.00%									
15.00%									
20.00%									
25.00%									
30.00%									

5) Select cells A8:B12. Choose Data->What If Analysis->Data Table (Alt+A+W+T).

6) Enter \$B\$4 as the column input value. Enter \$B\$2 in Row input. Press Ok.

7) The result looks like the following:

30	180	190	200	210	220	230	240	150
		30.		49.		68.		
5.00%	21	5	40	5	59	5	78	-7.5
10.00%	12	21	30	39	48	57	66	-15
15.00%	3	11.	20	28.	37	45.	54	22.
20.00%	-6	2	10	18	26	34	42	-30
25.00%	-15	-7.5	0	7.5	15	22.	30	37.
30.00%	-24	-17	-10	-3	4	11	18	-45

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- 8) Print the sheet in A5 paper, landscape orientation with header **Row and column based data table using Excel.**

### (93) Relative, semi-relative and absolute referencing in MS Excel

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter the headings in cells A1 to I1 as follows:

Cell value	Relative reference	Relative reference: Copied from Column B	Semi-Relative reference: Row Frozen	Semi-Relative reference: Column Frozen	Absolute referencing: Row and column frozen
------------	--------------------	---	-------------------------------------	--	---

- 3) Enter the values 5, 10, 15, 20 and 25 in cells A2 to A5.
- 4) Enter the following formulae in cells B2 to F2.

=A2*A2	=B2*B2	=A\$2*A\$2	=\$A2*\$A2	=\$A\$2*\$A\$2
--------	--------	------------	------------	----------------

- 5) Copy the values of cells B2 to F2.
- 6) Paste them by selecting the range B3 to F5.
- 7) Look at the manner in which formulae change when referenced using relative system, semi-relative system and absolute system of referencing.

### (94) Referencing data from different sheets and from different workbooks.

#### PROCEDURE:

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter **Values** in cell A1.
- 3) Enter the following values in cells A2 to A10: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50.
- 4) Open new sheet (Sheet2). Enter square values in Cell A1 of Sheet2.

- 5) Enter the following formula in cell A2 of Sheet2:  
=power(Sheet1!A2,2).
- 6) Copy the formula from cell A2 of sheet2 and paste the same in cells A3 to A11 of Sheet2.
- 7) Save the present workbook with a name (say COPA).
- 8) Open new workbook (Ctrl+N). Save it with another name.
- 9) Enter **Cube** in cell A1 of Sheet1 in the new workbook.
- 10) Enter the formula =**POWER([COPA.xlsx]Sheet2!\$A\$2,3)** in cell A2 of Sheet1 in the new workbook.
- 11) Copy the formula from cell A2 of Sheet1 and paste it in cells A3 to A11 in the new workbook.
- 12) The symbol [] is used for workbook name and the symbol ! is used to separate sheet name and cell reference.

### **(95) Freezing of cells, cell protection, sheet protection and opening password to protect Excel documents**

- 1) Open MS Excel (Press Windows+R, type “excel” and press Enter or choose Start->All Apps->Microsoft Office->Excel from the start menu).
- 2) Enter **Angle, Sin, Cos, TAN** in cells A1 to D1.
- 3) Choose View->Freeze Panes->Freeze Top Row.
- 4) Enter **0, =sin(radians(a2)), =cos(radians(a2)), =tan(radians(a2))** in cells A2 to D2.
- 5) Choose Home->Format cells-> Lock cells and choose Home->Format cells->Protect sheet. Enter a password and confirm the password again.
- 6) Choose Review->Protect Workbook.
- 7) Save the worksheet (or choose Save As if already saved). Choose Tools->General Options and enter password. Re-enter password and press save.

### **(96) Creating presentation for Frozen story using MS Power point**

#### **PROCEDURE:**

- 1) Open MS Powerpoint (Press Windows+R, type “powerpnt” and press Enter or choose Start->All Apps-

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- >Microsoft Office->Microsoft Office Powerpoint from the start menu).
- 2) By default, power point opens a blank title page.
  - 3) Choose Design->Themes and choose a theme (Alt+G+H).
  - 4) Choose Design->Colors (Alt+G+TC), Design->Fonts (Alt+G+TF) and Design->Effects (Alt+G+TE) and customize the colours, fonts and slide transition effects as you desire.
  - 5) Choose Insert->Header & Footer (Alt+N+H), select Slide. Place tick mark against Date and Time, choose date/ time format, place tick mark against Slide number, Place a tick mark against Footer (enter your name in the footer box). Place a tick mark against Don't show on title slide.
  - 6) Choose Animation. Set Transition speed and Transition sound as you wish. Choose Apply to all to apply the settings to all slides.
  - 7) In the first slide, type the title of the presentation ("Jungle Book" and author name ("<your name>").
  - 8) To insert a new slide, choose Home->New Slide (Alt+H+I) and select the layout suitable for your purpose (whether you need 1 column or 2 columns).
  - 9) Enter a title for the slide. Insert the text. If you need to insert a picture or table, choose Insert->Picture (Alt+N+P) or Insert->Table (Alt+N+T).
  - 10) If you need to change the layout of a slide after inserting it, choose Home->Layout (Alt+H+L) and change the layout.
  - 11) You can increase or decrease font size using Home->Font Size (Alt+H+FS) or using Ctrl+Shift+< (decrease)/ Ctrl+Shift+> (increase).
  - 12) After completing the presentation, choose View->Slide Show (Alt+W+S) or F5 to start the presentation from the first slide.
  - 13) If you wish to start the presentation from current slide, press Shift+F5.
  - 14) Connect projector to the CPU and make a presentation of the content created by you.
-

## **(97) Adding narration to slides using MS Powerpoint**

### **PROCEDURE:**

- 1) Open MS Powerpoint (Press Windows+R, type “powerpnt” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Powerpoint from the start menu).
  - 2) Choose the slide for which you wish to record narration.
  - 3) Select Slide Show->Record Narration (Alt+S+N).
  - 4) Press OK in the dialog to start recording.
  - 5) Start speaking the information related to the slide.
  - 6) After completing the narration, press Esc key.
  - 7) When a dialog to save the narration appears, choose Save.
  - 8) Press Shift+F5 and verify whether the narration plays well.
  - 9) If the narration plays out well, proceed to next narration. If the narration is not acceptable, re-record the narration.
- 

## **(98) To create handouts using MS Powerpoint**

### **PROCEDURE:**

- 1) Open MS Powerpoint (Press Windows+R, type “powerpnt” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Powerpoint from the start menu).
  - 2) Open the original presentation for Cinderilla story.
  - 3) Choose File->Publish->Create Handouts in Microsoft Office Powerpoint.
  - 4) Choose Outline only in the dialog that appears to select the format.
  - 5) Press OK.
  - 6) MS Word opens with the text outline of the presentation.
  - 7) You may change the font and style to suit printing of the handout.
-

## **(99) Creating resume using PowerPoint and exporting to MP4 video**

### **PROCEDURE:**

- 1) Press Windows+R, type powerpnt and press Enter key.
- 2) When powerpoint opens, choose a template.
- 3) Type Resume against title. Type your name in subtitle.
- 4) Create first slide with the caption "Personal Details". Enter your name, father name, mother name and date of birth in table format.
- 5) Create next slide with the caption "Communication Details". Enter mobile number, email ID and postal address in table.
- 6) Press Ctrl+M, create new slide. Enter "Educational Qualification". Create a table containing your educational details.
- 7) Create new slide with title "Technical Skills". Enlist the skill sets you have.
- 8) Create new slide with the caption "Work Experience". Type the experience you have in the slide. Otherwise, type Fresher.
- 9) Apply animations and transitions to all the slides of the presentation.
- 10) Export the video to MP4 format using File->Export->Export as Video. Enter a name for the video. Play the video when completed.
- 11) Press Ctrl+P, choose 6 slides vertical layout and Microsoft Print to PDF against printer. Export the slides to handouts and print them.

## **(100) Create a Powerpoint presentation containing computer components**

### **PROCEDURE:**

- 1) Press Windows+R, type PowerPnt and press enter key.
- 2) Enter Computer Components in title and your name in subtitle.
- 3) Type the name of component in caption and brief description of the component. Insert the image/ images relevant to the component.
- 4) Type. The names of all components and their descriptions.
- 5) Export the presentation as MP4 video and create a handout through Microsoft Print to PDF.



## (101) Installing XAMPP

### PROCEDURE:

- 1) Right Click on the XAMPP installation file. Choose Run As Administrator. Press Yes to confirm running the program as administrator.
  - 2) Press Next in the XAMPP welcome page.
  - 3) Select All Components and press Next.
  - 4) Choose the default installation folder. It should be c:\xampp for easy configuration.
  - 5) Press Next. Let the installation continue.
  - 6) After the installation finishes, ensure that a tick mark to open xampp control panel.
  - 7) Press Finish.
  - 8) When XAMPP control panel opens, choose US English (first flag). Press Save.
  - 9) Choose Start->All Apps->XAMPP->XAMPP control panel. Start the services required (Apache, MySQL, etc.)
- 

## (102) To create Database using MySQL

### PROCEDURE:

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel).
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.
- 4) Type ***mysql -u root -p*** in command prompt.
- 5) When prompted for a password, press blank enter (since there is password by default for MySQL server in XAMPP).
- 6) The MySQL prompt opens.
- 7) Enter the SQL command ***create database <your name>; (create database agalya);***. Press enter.
- 8) Issue the command ***use <your name>***.
- 9) Issue the command ***exit*** to close MySQL prompt.

**(103) To create table to store contacts data.**

**PROCEDURE:**

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel.
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.
- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) Press enter key when prompted for a password.
- 6) To create a table with columns (id, name, mobile) issue the following SQL command:

***create table contacts (id bigint auto\_increment primary key, name varchar(30) not null key, mobile varchar(20), email varchar(30));***

- 7) To verify the structure of the table, issue the command

**describe contacts;**

- 8) Verify that the description looks like the following result:

```
MariaDB [test]> describe contacts;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id    | bigint(20)    | NO   | PRI | NULL    | auto_increment |
| name  | varchar(30)   | NO   |     | NULL    |                |
| mobile| varchar(20)   | YES  |     | NULL    |                |
| email | varchar(30)   | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
```

**4 rows in set (0.09 sec)**

**(104) To insert data into contacts table using MySQL**

**PROCEDURE:**

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel.
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.

- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) Press enter key when prompted for a password.
- 6) To insert data into the contacts table (having columns id, name, mobile and email), type the following commands:

```
insert into contacts values(0, 'Sofia', '678675675', 'pavi@gmail.com');
insert into contacts values(0, 'Sowmiya', '323435345', 'pravee@gmail.com');
insert into contacts values(0, 'Kamalini', '8756434742', 'heera@gmail.com');
insert into contacts values(0, 'Sri', '678675675', 'shan@gmail.com');
insert into contacts values(0, 'Temp', '678675675', 'temp@gmail.com');
```

### **(105) To select data using MySQL**

#### **PROCEDURE:**

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel).
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.
- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) Press enter key when prompted for a password.
- 6) Use the following select commands:

Select \* from contacts;

Select \* from contacts order by name;

Select \* from contacts order by id;

Select \* from contacts order by name DESC;

Select \* from contacts where name = 'Temp';

Select \* from contacts where name like 'S%';

Select \* from contacts where name <> 'Kamalini' order by name DESC;

Select name, mobile from contacts order by name DESC;

Select name, email from contacts;

### **(106) To update data held in contacts table using MySQL**

#### **PROCEDURE:**

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel).
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.

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- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) Press enter key when prompted for a password.
- 6) To change email ID for name='Sri' from **sri@gmail.com'** to **sri12@gmail.com'**, enter the following SQL command:

**update contacts set email='sri12@gmail.com' where name='Sri';**

- 7) To delete a record where name='Temp', issue the following command:

**Delete from contacts where name='Temp';**

---

### (107) Adding new MySQL User and granting privileges

#### Procedure

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel).
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.
- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) Press enter key when prompted for a password.
- 6) To create a new user (named copa) with password (say gitiw), the following query should be issued:

**create user 'copa'@'localhost' identified by 'gitiw';**

- 7) After creating the user, privileges should be assigned to the user. The following query grants all privileges to user named copa.

**grant all privileges on \* . \* to 'copa'@'localhost';**

- 8) Instead of granting all privileges, separate privileges may be granted for: CREATE, SELECT, INSERT, UPDATE, DELETE and DROP.
- 9) To view privileges granted to a user (copa), the following query is useful:

- 10) Now, one may login to mysql server using the command **mysql -u copa -p**, followed by the password.

---

### **(108) Revoking privileges and removing MySQL user**

#### **Procedure:**

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel).
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.
- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) To revoke all privileges (or any one of CREATE, SELECT, INSERT, DELETE and DROP privileges), the following SQL query is useful:

**revoke drop on \*.\* from 'copa'@'localhost';**

**revoke DELETE on \*.\* from 'copa'@'localhost';**

**revoke ALL privileges on \*.\* from 'copa'@'localhost';**

- 6) Eventually, the user named copa can be deleted using the following query:

**drop user 'copa'@'localhost';**

- 7) Hereafter, the user named copa cannot login (since the user account has been removed).

---

### **(109) Deleting records from table, altering table structure, dropping table and drop database (using DML)**

#### **Procedure:**

- 1) Start MySQL service using XAMPP control panel (Start->All Apps->XAMPP->XAMPP Control Panel).
- 2) Open command prompt (Press Windows+R, type CMD and press enter).
- 3) Type CD c:\xampp\mysql\bin.
- 4) Type ***mysql -u root -p -D <your name>*** in command prompt.
- 5) To delete a particular row containing specific value, issue the following command:

**DELETE from contacts where name='Sofia';**

**Select \* from contacts;**

- 6) To add a new column (named landline) to the contacts table, one could issue the following SQL command:

**ALTER table contacts DROP COLUMN landline;**

**Select \* from contacts;**

- 7) To delete a column (say landline) from contacts table, issue the following command:

**ALTER table contacts DROP COLUMN landline;**

**Select \* from contacts;**

- 8) An entire table may be deleted through drop command as follows:

**DROP table contacts;**

**show tables;**

- 9) A database may be deleted by issuing the following command:

**DROP database copa;**

**show databases;**

---

### **(110) To create personal details and contact details tables using MS Access**

#### **PROCEDURE:**

- 1) Open MS Access (Press Windows+R, type "msaccess" and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Access from the start menu).
- 2) By default, MS Access shows a list of database templates.
- 3) When opening MS Access for the first time, choose Blank Database (Top left). When opening MS Access subsequently, choose the name of database from the list shown on the right side.
- 4) On choosing blank database, MS Access requests you to input a name for the database. Enter your name. The default database extension is **.accdb**.
- 5) Right click on Table1 and choose Design View. Change the table name to personal\_data.

- 6) Choose columns ID (Auto Number), Contact Name (Text), Address (Text), DOB (Date/Time, Medium Data). Right click the table name, choose Save followed by Close.
- 7) Then create a new table named contact\_details using Create->Table (Alt+C+TN) with the following columns: ID (Auto Increment), person\_id (Number, Required YES), Mobile1 (Text 50), Mobile2 (Text 50), email (Text, validation Rule **Like** “\*@\*”, validation text Invalid email ID).

### **(111) To create relationship between tables using MS Access**

#### **PROCEDURE:**

- 1) Open MS Access (Press Windows+R, type “msaccess” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Access from the start menu).
- 2) Select the database created by in the previous exercise (containing 2 tables named personal\_data and contact\_details).
- 3) Choose Database Tools->Relationships (Alt+A+E).
- 4) In the dialog shown to select database tables, select personal\_data and press Add. Then select contact\_details and press Add.
- 5) Press Close to dismiss the table selection dialog.
- 6) Click on ID column in the personal\_data table, drag the mouse and drop on the person\_id column of contact\_details.
- 7) A dialog appears to connect ID column of personal\_data to person\_id table column of contact\_details table.
- 8) Press Create button.
- 9) A line appears connecting ID column of personal\_data and person\_id column of contact\_details.
- 10) Now the tables personal\_data and contact\_details are related through ID and person\_id columns.

### **(112) To create blank form for data entry using MS Access**

#### **PROCEDURE:**

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- 1) Open MS Access (Press Windows+R, type “msaccess” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Access from the start menu).
  - 2) Select the database created by in the previous exercise (containing 2 tables named personal\_data and contact\_details).
  - 3) Choose Create->Blank Form (Alt+C+FB).
  - 4) Press Show all tables label shown on the right side panel to visualize all tables.
  - 5) Choose personal\_data table.
  - 6) Double click on Contact name.
  - 7) Double click on address.
  - 8) Double click on DOB.
  - 9) The ID column need not be manually filled since it belongs to auto\_increment category.
  - 10) Fill the columns.
  - 11) Press next column and the entries are saved.
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### **(113) To Create Report using in MS Access**

#### **PROCEDURE:**

- 1) Open MS Access (Press Windows+R, type “msaccess” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Access from the start menu).
- 2) Open your database.
- 3) Choose Create->Report (Alt+C+RN).
- 4) Select the columns to be included in the report.
- 5) Select Report View.
- 6) You can also use the report wizard to create new report.
- 7) Choose Create->Report Wizard.
- 8) Select the columns required to be included in the report.
- 9) Under groupings, choose none.
- 10) On finishing the wizard, the report is displayed.

### **(114) To Generate Query using in MS Access**

#### **PROCEDURE:**



- 1) Open MS Access (Press Windows+R, type “msaccess” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Access from the start menu).
- 2) Choose Create->Query Wizard.
- 3) Select the table and columns to be included in the query.
- 4) On completing the wizard, choose Design view.
- 5) Choose filter values to be applied for the columns.
- 6) Choose Datasheet view to view the results.

### **(115) To create form using Wizard in MS Access**

#### **PROCEDURE:**

- 1) Open MS Access (Press Windows+R, type “msaccess” and press Enter or choose Start->All Apps->Microsoft Office->Microsoft Office Access).
- 2) Select the database created by in the previous exercise (containing 2 tables named personal\_data and contact\_details).
- 3) Choose Create->More Forms->Form Wizard (Alt+C+FM+W).
- 4) Choose the table and the columns to be used in the form.
- 5) Press Next. Choose Layout of the form (Columnar, tabular, datasheet or justified).
- 6) Choose the style (from several alternate styles listed with preview).
- 7) Press Next.
- 8) Choose Finish.
- 9) Navigate between existing records.
- 10) When the record after the last record is chosen, blank form for entering new data is displayed.

### **(116) Creating CAT 5e/ CAT 6 Networking / Ethernet cable crimped with RJ45**

#### **PROCEDURE:**

- 1) Take sufficient length of CAT 5e or CAT 6 cable. Cut it out using the cutting edge of the crimping tool.
- 2) Use insulation remover to remove the insulation.

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- 3) Cut out any threads and central piping other than the twisted wires.
  - 4) There are 4 pairs of twisted wires in OBG (Orange, Blue, Green Merun) combination.
  - 5) Straighten the twisted pairs. Each pair contains a fully coloured wire (OBGM) and a white and colour combination wire (  $\dot{O} \dot{B} \dot{G} \dot{M}$  ).
  - 6) Arrange the wires in the order  **$\dot{O}\dot{O} \dot{G}\dot{B} \dot{B}\dot{G} \dot{M}\dot{M}$** .
  - 7) After straightening the wires, keep the wires in the right order and cut them using the cutting edge of the crimping tool.
  - 8) Insert the 8 cables in the RJ45 head. The cables should enter aligned to the edge opposite to the lock provided in the RJ45 head.
  - 9) Apply gentle pressure, which sends the cable fully through the RJ45 head and touches the end of the head.
  - 10) Place the RJ45 head in the appropriate slot of crimping tool.
  - 11) Crimp the head by applying gradual pressure on the RJ45 head and keeping the pressure constant for a few seconds.
  - 12) Repeat the same steps at the other end of the CAT 5e or CAT 6 networking cable.
  - 13) Connect one end of the crimped cable to the end of existing Internet connector (like Switch) and the other end to RJ45 slot of a personal computer.
  - 14) If Internet connection is established, the crimping was a success. Otherwise, repeat steps 1 to 13 again until successful Internet connection is established.
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