Course Outline 2016-17
Computer Studies
Class VI

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Course Book- Right Byte Book 1 [Fourth Edition]

August

Chapter 1: The Evolution of Computer

Contents

- How computer processes data; Forms of processing.
- The early computing devices and the electronic computer
- The Generations of computer-1st till 5th generation
- Classification of computers according to: type of data processed and size [Super Computer to Microcomputers]
- Explore how electronic components have evolved from early computers till current machines which contained specialized microprocessors, called Embedded computers
- The use of a microcontroller in automatic appliances, making it smart.
- Advantages of Computer.

Activity

- Study five generations of computers in terms of technology used in each generation. Students will arrange their information in columns and submit the assignment in hardcopy.
- Differentiate computers according to size, speed and functionality and area of application. Students will make a comparison chart.
  - True/False quiz (LFL Activity)
  - Dot to vote (LFL Activity)
  - KQL (LFL Activity).

Assessment

- Work done in the book and in copy
- Practical in Computer Lab.
- Concept Review.
### September

#### Chapter 1: The Evolution of computer

**Contents**
- Define the terms: Analogue and digital data
- Analogue and digital devices.
- Categorization of given data into analog and digital.
- Use of computers in various places.

#### Chapter 8: Spreadsheets

**Contents**
- Define the terms: Analogue and digital data
- Analogue and digital devices.
- Categorization of given data into analog and digital.
- Use of computers in various places.

**Spreadsheets:**
- Define what is a spreadsheet?
- Understand the term worksheet, workbook, column, row, cell reference, cell range, active cell.
- The function and position of formula bar.
- The elements of spreadsheet; [Cell, Cell Address, Name box, Function box]
- Types of data that can be entered into a cell [Values and Labels]
- Using formulae in spreadsheets:
  - Built-in formula: SUM, PRODUCT, AVERAGE, IF
  - Custom made formula, fore.g.; Formula to find the Percentage, or Calculate Profit/Loss etc.
- Charts and graphs insertion
- Applying Conditional formatting,
- Explain how a spreadsheet is created, edited, formatted and saved in Microsoft Excel

**Tasks**
- Choose any two work places and find out how computers are being used in them.
- Prepare a search report on your findings.

**Assessment:**
- Students will be assessed and graded on the basis of their duly submitted search report

**Lab Task:**
- Lab session1: Design students mark sheet
- Lab session 2: Design stock report of a supermarket
- Lab session 3: Design your monthly budget sheet
- Lab session 4: Design bake sale report

**Assessment:**
- Students will be assessed on the basis of their performance during the tasks given by the teacher.

### October

#### Chapter 2: Input devices

**Contents**
- Keyboard—The typing device
- Explain the use of Keyboard, as the most common input device. Also discuss the type of keyboards; QWERTY and Braille keyboard
- Pointing devices-Mouse (Optical and mechanical), Light Pen, Touch Screen, Touchpad, Joystick.
- Digitizing devices- Graphic tablets and digital notepad

**Task**
1. Identify the type of sensors installed in:
   - Automatic door
   - Automatic street lights
   - Air conditioner

**Task**
- Define video conferencing.
- Give one limitation of web camera.

**Activity:**
- **Scanning devices**: Scanners (flat bed and handheld), finger print reader, card reader, barcode reader, and POS terminal

- **Character and mark recognition devices**: Study the area of application of OCR, MICR, BCR, OMR

- **Image capturing devices**: Web Camera and Digital Camera, Webcam. Discuss the use of web camera for video/electronic conferencing

- **Audio based input devices**: Voice Recognition systems and Musical instrument digital interface (MIDI)

- **Sensors and its types**: Pressure, Light and temperature sensors

- **Examples from daily life to identify the type of sensor used in different application**

- **Biometric devices**: Finger print reader and how it is used for identification and security purpose.

- **Identify various input devices and explain their use, advantages and limitations.**

- **Selection of appropriate input devices for different types of data.**

- **Find out the places where you find sensors being installed.**

- **True/False quiz (LFL Activity)**

- **Dot to vote (LFL Activity)**

- **KQL (LFL Activity).**

**Assessment:**
- Work done in the book and in copy
- Practical in Computer Lab
- Concept Review.

**Task**
- Find out the use of biometric devices in the following places, also state the reason of using that particular device.
  - Passport office
  - Schools/Offices

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**November**

Revision

Revision of the previously discussed topic.
Revision worksheet/Test/Quiz

**December**

Mid-Year Examination 2016
January

Chapter 3: Output devices
Chapter 9: Multimedia Presentation

<table>
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<tr>
<th>Contents</th>
<th>Tasks</th>
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<tr>
<td>➢ The monitors and its types. [CRT, LCD, Plasma] Compare and contrast CRT with LCD in terms of quality and outlook.</td>
<td>➢ Find out two devices/systems that might be helpful for a person with disabilities. Also explain how these systems help disable person</td>
</tr>
<tr>
<td>➢ The printer and its types [ Laser, Inkjet, Dot-matrix] Know why Laser printer is called Page printer and Dot-matrix as character printer. Selection of printer based on the required quality output</td>
<td>➢ Students will make a leaflet showing different output devices and their areas of applications.</td>
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<tr>
<td>➢ Plotters: The working of plotter and difference between Printer and Plotter. Identify the situations where Plotter is preferred.</td>
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<td>➢ Speakers Used to give sound based output, Understand the use of speech synthesizer for providing oral commands to the user.</td>
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<tr>
<td>➢ MFD’s: Explanation of the term MFD. Discuss the advantages and disadvantages of MFD’s</td>
<td></td>
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<tr>
<td>➢ Multimedia Presentation: Understanding of the term multimedia. Explanation of different types of media/medium to convey information: Print and electronic media.</td>
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<td></td>
<td>Presentation views: Understand the purpose of each type of view[Print, Normal and Slide-sorter]</td>
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<td>Making a presentation applying different tools available.</td>
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<td>[Slide transition, Animations, inserting pictures,]</td>
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<tr>
<td>Assessment:</td>
<td>Activity:</td>
</tr>
<tr>
<td>✓ Worksheet</td>
<td>Go to a supermarket and buy some items of your choice. Then go to POS terminal, and make the following observations:</td>
</tr>
<tr>
<td>✓ Concept Review</td>
<td>✓ Find the number input/output devices attached to the system</td>
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<td>✓ Name all the devices which you found in the POS terminal</td>
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<td></td>
<td>✓ Type of printer which is printing the receipts.</td>
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<td>✓ Prepare the same billing report on your own computer using MS EXCEL program, insert appropriate formulas to get the result.</td>
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<tr>
<td></td>
<td>✓ True/False quiz (LFL Activity)</td>
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<td>✓ Dot to vote (LFL Activity)</td>
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<td></td>
<td>✓ KQL (LFL Activity).</td>
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</table>

Task

✓ Make a presentation on the topic ‘Output Devices’, for each type of device give a brief definition, insert a picture of the device and a table to highlight its advantage and disadvantage
✓ Apply different Animation on each slide.

Assessment:

✓ The following lab task will be given to assess and grade the skills learnt in this chapter.
✓ Students will prepare a presentation on any topic of their choice, making it informative and attractive using multiple features available in MS-POWER POINT.
February

Chapter 4: Processing & storage

Contents
- Explain the function of CPU/Processor
- Define the term microprocessor
- Components of CPU-defining ALU, CU and MU.
- Explain the role of each component of CPU.
- Main Memory:
  - Compare and contrast RAM with ROM.
  - Also discuss why ROM is called firmware and what type of program is stored in RAM and ROM.
- Backing storage:
  - Categorize Secondary storage devices into:
    - Hard Drive
    - Optical drive
      - CD (CD-R, CD-ROM, CD-RW)
      - DVD (DVD-ROM)
    - Flash drive (Solid state drive)
      - USB
      - Smart card
- Explain why users need secondary storage device to store their data.

Activity
- True/False quiz (LFL Activity)
- Dot to vote (LFL Activity)
- KQL (LFL Activity).

Task

Assessment:
- Work done in the book and in copy
- Practical in Computer Lab
- Concept Review.

March

Chapter 10: Logo

Contents
- Starting Logo
- The Graphics window
- The Commander window
- Entering Commands
- Ending Logo
- Commands and programming in Logo.
- Introduce students to Logo
- Explain the importance of commands or primitives to control a computer.
- Introduce the term syntax and explain its importance.
- Explain the advantage and use of procedures.

Task
- Create a procedure with the name TRIANGLE to draw a triangle with each of its sides being 60 steps long.
- Edit the procedure that you made in part(a), so triangle with each side 30 steps long is drawn.

Assessment:
- Work done in the book and in copy
- Practical in Computer Lab
- Concept Review.

April

Course Completion
Revision Worksheets/Tests/Quizzes

May

Final Examination 2017