**Institute of Information Technology and Management, New Delhi**

**(Affiliated to GGSIP University)**

**Lesson Plan for Fundamental of Computers and IT Lab**

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| **Course Name: BCA Semester: 1st Paper Code: BCA 173 Academic Session:** **2021-2022** |

**Note**: All students are required to conduct the listed practical and include the solutions in the practical file. These are to be conducted along with the coverage of syllabus in the classroom. Each new program has to be started from a fresh page.

**Note: Students are required to get their practical files checked on weekly basis.**

**No of hours allotted to complete the syllabi**\*: 50

**Learning Objectives:-**

The objectives of this course are to provide the learners:

1. Basic knowledge of computers Software and Hardware
2. Expertise in using DOS Commands.
3. Attain proficiency in using application software for Word Processing, Spreadsheet and Presentation.

**Pre-Requisite: Nil**

**Course Outcomes: -** After completion of this course, the learners will be able to:-

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| **CO #** | **Detailed Statement of the CO** | \*BT Level | Mapping to PO # |
| CO1 | Work with basic DOS Commands and Windows Explorer | BTL3 | P01, P02 |
| CO2 | Create Word Documents using advanced features of MS Word. | BTL3 | P01 , P02 |
| CO3 | Create Worksheet using advanced features of MS Excel | BTL3 | P01, PO2 |
| C04 | Create interactive Presentation using advanced features of MS Power-point. | BTL3 | P01, P02 |

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| **S. No.** | **Lecture Objective** | **Application Area** | **Problem Statement** | **Hours allocated** | **Lab Outcome** | **Date on which Completed** |
|  | Elementary understanding  of MS-WORD | **Operating System** | Write down the properties of different operating system | **2 Hrs** |  | **00jn** |
|  | Understanding of DOS commands | **MS-DOS**  **Commands** | Definition of **MS-DOS**  Write down the functions and the syntax of the following internal DOS Commands : Date, time, label, path, vol, help, exit, cls, DIR. File and Directory Commands, COPY CONE, TYPE, CD.., MD, RD,ERASE,REN,COPY,MOVE,FIND,CD,CD\,DELETE, XCOPY, TREE, FC, CHECKDISK, SORT | **2 Hrs** |  |  |
|  | Learning MS-WORD | **MS-WORD** | To explore Windows Explorer functionalities like create, rename, move, delete folder  and files etc. | **2 Hrs** |  |  |
|  | Praticising Basic paragraph format | **Ms Word**  **(Basic Features)** | To practice the use of basic formatting features - Format Painter, Indentation, Line spacing, background colour, find, replace, dictate commands. | **2 Hrs** |  |  |
|  | Understanding of basic concept in ms word using list | **Ms Word**  **(Basic Features)** | To practice the use of Bullets, numbering, multilevel lists and use of Table Feature- Insert table with rows and columns, draw tables, excel spreadsheet and quick tables etc. |  |  |
|  | Understanding of figure in ms word | **Ms Word**  **(Home Tab )** | Create a pamphlet of a company with following options.  To practice the use of Insert Features — add picture, Chart, SmartArt, WordArt, Equation,  Symbols, Header and Footer, Page Numbering etc. and the use of Design Features — Watermark, Page color, Page Border, Themes implementation etc. | **2 Hrs** |  |  |
|  | Understanding of layout of page with other settings | **Ms Word** | To practice the use of Layout Features—Margins, Orientation, Size, Columns, Indent, Spacing etc.  Create a document containing brief introduction of IITM, Vision, Mission and Courses Offered and perform the following:   * Insert a Cover Page * Insert Page Break before Vision, Mission and Courses Offered. * Drop Cap First Letter of all the Explanations. * Insert Date and Time at the starting of the Document. * Set margins of all sides to 1.25 each. * Arrange the document in both orientations. * Divide the courses offered in 2 Columns. * Insert Line Numbers. * Insert a Foot note for IIT at first page * Insert an end note for address on first Page | **2 Hrs** |  |  |
|  | Learning the concept Mail Merge | **Ms Word** | To practice the use of Mail Merge Feature to generate Envelops and Labels.  Design an Invitation to Birthday Party using mail merge features send the invitation to 10 friends. | **2 Hrs** |  |  |
|  | Enhancing the knowledge of word as per the real life requirement | **Ms Word**  **(Templates)** | Create your Resume using basic formatting features like : table, bullets, word art etc and Check the spelling and grammar in an existing document and it should be properly aligned with proper format |  |  |
|  | Learning the Documentation | **Ms Word** | Write an Article for Magazine with 3 columns and create hyperlink for it. | **2 Hrs** |  |  |
|  | Learning the macro feature in ms-word | **Ms Word** | Create a macro using Keyboard .Write steps of the same |  |  |
|  | Understanding of basic concept in ms excel | **MS-Excel**  **(home)** | Create a spreadsheet of the purchases made by a customer in a super mart having the following fields:   * + S.no   + Product ID   + Product Name   + Product type(food, clothes, toys etc)   + Quantity   + Price per unit   Note: All the field names should be bold and underlined. Also Insert Borders to the spreadsheet. For the spreadsheet created above, find the total bill, using the auto sum facility of Ms Excel. | **2 Hrs** |  |  |
|  | Understanding of basic concept in ms excel | **MS Excel (Formating)** | Create a spreadsheet having fields: as Roll No, Student Name, Subject1, Subject 2, Subject 3,Subject 4, Subject 5 . Now design a student performance report using Conditional formatting in M.S. Excel the following specifications:   * + Greater than   + Less than   + Equal to   + Between   + Data bar   + Color Scales   Also perform wrap text on Name, orientation on all the headings and merge cells operation. | **2 Hrs** |  |  |
|  | Practical knowledge of b asic functions | **MS-Excel** | Create a record of ten students consisting of S.no, name, course and marks in two subjects(M1,M2),total and percentage and perform the following operations:   * + Sort the records in ascending order of marks M1   + Sort the record according to descending order of names   + Round off percentage to one decimal place   + Convert the percentage in text   Apply filter on course field | **2 Hrs** |  |  |
|  | Implementing the application of chart | **MS-Excel** | Create a spreadsheet for Student Performance Report of 2 students containing date of exam, day of Exam, Subject and Marks  Fill Date and day using Fill Series Facility.  Also create the Column Chart for above and apply:   * Chart title * Axis * Fill Color * Border color * Shape effects Size | **2 Hrs** |  |  |
|  | Implementation of charts in application | **MS-Excel** | Draw the Line Chart and Pie Chart for the sales report of the ABC Pvt. Ltd of 5 Products for last 3 years in M.S. Excel and explore the following properties :   * Legend * Data Label * Axes * Gridlines | **2 Hrs** |  |  |
|  | Learning Pivot chart | **MS-Excel** | Create the Pivot Chart for the sales of Computer Hardware of KCL Pvt. Ltd for 3 Years. | **2 Hrs** |  |  |
|  | Implementation of charts in application | **MS-Excel** | Create a Bar graph for 5 states for 3 years depicting the literacy rate. For the graph created above perform the following   * + Switch Row/column,   + Change it to column chart | **2 Hrs** |  |  |
|  | Understanding the concept of conditional formatting | **MS-Excel** | Create the student grade (Roll No, Name, Percentage), Assign Grades (A (>90), B(>75), C(>50) & D) using IF and IF Else condition in M.S. Excel.   * Now using the conditional formatting fill the A grade as -pink, B grade as blue, C grade as yellow and D grade as Red. * Also Split the roll No in 4 parts (Roll No, Batch, course, year) and Name in 2 parts (First and Last Name) and remove duplicate course | **2 Hrs** |  |  |
|  | Learning pivot table | **MS-Excel** | Create a record of Bank consisting of the following columns:   * + Customer id   + Customer Name   + Principle Deposited   + Rate of Interest   + Time   Now for the above table  i) Find the interest earned by each customer. Each customer must earn minimum interest of Rs5000, by changing the value of time period for which money must be deposited  ii) Change the minimum interest to Rs 10000 by changing the value of Principle.  Apply Freeze Panes | **2 Hrs** |  |  |
|  | Learning permission setting with respect to columns | **MS-Excel** | Create a record of BCA(1st Sem) consisting of the following fields:   * + S.No.   + Name   + Date of birth   + Age   + Marks   + Remarks   For the above record, apply data validation.  For the records above, protect your worksheet by providing password   * + Hide/unhide cells.   + Allow users to select columns   + Allow users to sort cells   + Don’t allow users to delete cells   Don’t allow users to format cells | **2 Hrs** |  |  |
|  | What if analysis | **Goalseek, solver and Scenario Manager** | Apply Goal seek, Scenario Manager and solver for calculation outcome of interest amount for given principal amount, rate of interest and duration. | **2 Hrs** |  |  |
|  | Linking of Worksheet and workbook | **Linking Sheets** | Based upon question number 19, create linked sheet to gather the data of different grades on different sheets. | **2 Hrs** |  |  |
|  | Learning animation and hyperlinks concepts | **MS-PowerPoint** | Create a presentation on Types of Memory and Apply the following   * Insert a blank slide and draw memory classification using Organization Chart * Compare RAM & ROM using Comparison Layout   Insert hyperlinks on the types of Memory that opens new slides for it. | **2 Hrs** |  |  |
|  | PPT Designing | **MS-PowerPoint** | Create a presentation on types of Operating Systems and apply the following:   * Apply any one theme * Apply the animation effects * Change transition speed to slow.   Apply automatic time duration to all Slides | **2 Hrs** |  |  |
|  | **PPT Designing** | **MS-PowerPoint** | Create a presentation on Components of Computer System and perform the following:   * Apply Rehearse Timing * Apply the different slide show options   Protect the presentation to restrict unauthorized access. | **2 Hrs** |  |  |

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