B.A.-II (PAPER CODE: BA314)/B.Sc-Med-II (Paper Code: BM304)/ B.Sc(Non-Med)-II (Paper Code: BNM304) Sem-III
Data Analysis Using Spreadsheets

Total Marks: 70
External Marks: 50
Internal Assessment: 20

Minimum Pass Marks: 35%
Credit: 3
Lectures to be delivered: 45-55Hrs

Course Objectives	Course Outcomes
Gain knowledge of the data analysis process and its importance	Students will gain knowledge of data analysis concepts and decision-making applications
Learn spreadsheet fundamentals and basic operations	Students will understand spreadsheet components and perform basic operations
Understand data formatting and organization techniques	Students will format, sort, filter, and organize data effectively
Apply formulas, functions, and logical operations for data manipulation	Students will use formulas, functions, and logical operations to analyze data
Create and customize charts and graphs for visualization	Students will design charts and graphs to present data insights clearly

A) Instructions for paper-setter

The question paper will consist of three sections. Section A and B will have four questions each from respective units and candidates are required to attempt two questions each from section A and B. Each question in section A and B shall carry 7.5 marks. Section C will consist of 10 short answer type questions covering entire syllabus. Each question in section C will carry 2 marks.

B) Instructions for candidates

Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.

Section A

Introduction to Data Analysis Overview of the data analysis process and its importance in decision making, Understanding the role of spreadsheets in data analysis, exploring real-world applications of data analysis

Spreadsheet Fundamentals Spreadsheet Basics, Introduction to popular spreadsheet software, understanding spreadsheet components, working with basic operations in spreadsheets, Data Formatting and Organization Formatting cells, organizing data using sorting and filtering techniques, applying conditional formatting to highlight data patterns.

Data Manipulation and Visualization Data Manipulation Techniques, using formulas and functions for data manipulation, working with logical functions for conditional data analysis, utilizing lookup and reference functions for data retrieval, Creating Charts and Graphs, Selecting appropriate chart types for different data scenarios, Creating and customizing charts, adding data labels and formatting options to enhance chart readability

Section B

Advanced Functions and Formulas Logical and Text Functions, Using logical functions for data analysis and decision making, Applying text functions for data manipulation, Lookup and Reference Functions, understanding lookup functionsfor data retrieval, working with

reference functionsfor advanced data analysis, Statistical and Mathematical Functions, applying statistical functions for data summarization, Utilizing mathematical functions for numeric calculations

Data Analysis Techniques Pivot Tables and Data Summarization, creating pivot tables for data summarization and analysis, applying filters and slicers to explore data subsets, customizing pivot tables and generating meaningful insights, data Validation and Error Handling, Implementing data validation rules to ensure data accuracy, Handling errors and troubleshooting data issues, Using data auditing techniques to identify and resolve errors, Creating Interactive Dashboards, Designing interactive dashboards for data visualization, using form controls and drop-down lists for dynamic data analysis, Creating interactive charts and reports within the dashboard.

B.A.-II (PAPER CODE: BA314P)/B.Sc-Med-II (Paper Code: BM304P)/ B.Sc(Non-Med)-II (Paper Code: BNM304P)

Semester-III

Practical based on Data Analysis Using Spreadsheets

Total Marks: 30 Maximum Times: 2 Hrs.
Practical External Marks: 20 Credit: 1
Practical Internal Assessment: 10 Minimum Pass Marks: 35%

The laboratory course will comprise of Activities related to out based Data Analysis Using Spreadsheets

Projects (Choose any one)

1. Student Performance Analysis
   Dataset: Marks of students across subjects, attendance percentage, extracurricular activities.
   Tasks:
   - Calculate average marks, highest/lowest scores.
   - Use conditional formatting to highlight students below 40%.
   - Create charts comparing performance across subjects.

   Outcome: Identify weak subjects, attendance impact on performance.
2. Online Shopping Trends
   Dataset: Customer ID, Product Category, Quantity, Price, Payment Method, Region.
   Tasks:
   - Find top-selling categories.
   - Use VLOOKUP to retrieve product prices.
   - Create bar charts showing regional sales.

   Outcome: Understand customer preferences and regional demand.
3. Transport & Fuel Analysis
   Dataset: Vehicle ID, Distance Travelled, Fuel Consumed, Maintenance Cost.
   Tasks:
   - Calculate mileage (Distance ÷ Fuel).
   - Highlight vehicles with mileage < 10 km/l.
   - Create line graphs showing monthly fuel consumption.

   Outcome: Identify cost-efficient vehicles.
4. Movie Ratings Dashboard
   Dataset: Movie Name, Genre, Release Year, IMDB Rating, Box Office Collection.
   Tasks:
   - Sort movies by rating.
   - Use IF function to classify movies as “Hit” or “Flop.”
   - Create charts showing genre-wise average ratings.

   Outcome: Spot trends in audience preferences.
5. Agriculture Yield Analysis
   Dataset: Crop Type, Area (acres), Yield (kg), Rainfall (mm), Fertilizer Used.
   Tasks:
   - Calculate yield per acre.
   - Highlight crops with yield below average.
   - Create charts showing rainfall vs. yield.

   Outcome: Understand factors affecting productivity.

The breakup of marks for the Examination will be as under:

Viva Voce : 10 Mark
Project Report : 10 Marks

B.A.-II (PAPER CODE: BA414)/B.Sc-Med-II (Paper Code: BM404)/ B.Sc(Non-Med)-II (Paper Code: BNM404)

Sem-IV

Web Designing Using HTML and DHTML

Total Marks: 70
External Marks: 50
Internal Assessment: 20
Minimum Pass Marks: 35%
Credit: 3
Lectures to be delivered: 45-55Hrs

Course Objectives	Course Outcomes
Gain knowledge of HTML basics, tags, and structure	Students will design static web pages using HTML elements
Learn formatting, links, images, and tables in HTML	Students will apply formatting, hyperlinks, images, and tables in web design
Understand DHTML concepts	Students will create dynamic web pages using DHTML features
Explore interactive design and validation techniques	Students will implement interactive features and validate user input

A) Instructions for paper-setter

The question paper will consist of three sections. Section A and B will have four questions each from respective units and candidates are required to attempt two questions each from section A and B. Each question in section A and B shall carry 7.5 marks. Section C will consist of 10 short answer type questions covering entire syllabus. Each question in section C will carry 2 marks.

B) Instructions for candidates

Candidates are required to attempt two questions each from sections A & B of the question paper and the entire section C.

Section A

Introduction to HTML: Basic HTML concepts, an overview of HTML markup. What is good Web design, the process of Web publishing, implementation, the phases of Web site development, HTML's role in the Web, and issues facing HTML and the Web. HTML overview: the structure of HTML documents; document types, the element; the element, the element.

Links and Addressing: Linking basics, what are URLs; linking in HTML, anchor attributes, images and anchors, image maps; semantic linking with the element, meta-information.

HTML and Images: The role of images on the Web, image preliminaries; imagedownloading issues, obtaining images, HTML image basics, images as buttons; and image maps.

Introduction to Layout: Backgrounds, Colors, and Text, Design requirements, HTMLapproach to Web design, fonts, colors in HTML, document-wide color attributes for and background images. Introduction to lists, tables, frames.

Section B

Basic Interactivity and HTML: Forms form preliminaries; the element; formcontrols. Dynamic HTML (DHTML): dynamic HTML and document object model, HTML andscripting access, rollover buttons, moving objects with DHTML, and ramifications of DHTML.

Style Sheets: style sheets basics, style sheet example, style sheet properties, positioning withstyle sheets.

Client-Side Scripting: Java script: Introduction, documents, forms, statements, functions,objects, Event and event handling, Browsers and the DOM events

B.A.-II (PAPER CODE: BA414P)/B.Sc-Med-II (Paper Code: BM404P)/ B.Sc(Non-Med)-II (Paper Code: BNM404P)

B.A./B.Sc-Med/B.Sc(Non-Med) Part-II Sem-IV
Practical based on Web Designing Using HTML and DHTML

Total Marks: 30 Maximum Times: 2 Hrs.
Practical External Marks: 20 Credit: 1
Practical Internal Assessment: 10 Minimum Pass Marks: 35%

The laboratory course will comprise of Activities related to out based HTML and exercise it's what is learnt under Paper such as

Program List

i. Write an HTML code to display "welcome to HTML"
ii. Write an HTML code to display "welcome to HTML" message and set the picture background.
iii. Write an HTML code to display "hello world" in bold an italic font
iv. Write an HTML code to display message with <h1> to <h6> heading tags
v. Write an HTML code to print the squares of the numbers 1-10. Each number should be on a separate line, next to it the number 2 superscripted, an equal sign and the result.
vi. Write an HTML code to display the number 1-15, each number being a different color.
vii. Prints an h1 level heading followed by a horizontal line whose width is 100%. Below the horizontal line print a paragraph relating to the text in the heading
viii. Write an HTML code to demonstrate <pre> and <blockquote> tag.
ix. Create a web page with an appropriate image towards the left hand side of the page, when user clicks on the image another web page should open
x. Design a webpage that display three marquee text with different behaviour
xi. Create a web page for internal links; when the user clicks on different links on the web page it should go to the appropriate locations/sections in the same page.
xii. Create a web page which divides the page in two equal frames and place the audio and video clips in frame-1 and frame-2 respectively
xiii. Create a HTML document containing a nested list showing a content page of any book.
xiv. Use tables to provide layout to your HTML page describing your college infrastructure.
xv. Wap in html to create a webpage to show various confectionary items using ordered list and unordered list.
xvi. Wap in html to create a webpage with four frames (Picture, table, list, and hyperlink)
xvii. Write down a program in html to show India map
xviii. Wap in html to design a Bio-Data
xix. Write an HTML page that contains a selection box with a list of 5 countries, when the user selects a country, its capital should be printed next to the list; Add CSS to customize the properties of the font of the capital

Lab Record : 5 Marks
Viva Voce : 10 Mark
Practical Work : 5 Marks