

F.Y.B.Com Syllabus

Computer Applications – I (SEMESTER I)

GE1: Generic Elective as per CBCS

Credits: 3(Theory)+1(Practical)

Marks: 100(Theory 75 + Practical 25)

Lectures: 45, Practical Lab: 15 Sessions

Batch Size: 20 students per batch

One Theory Lecture = One Hour & One Practical Lab Session = Two Hours

Course Objectives: To provide an understanding of essential Information Technology Concepts and Emerging Technologies. Includes practical skills in data capture, analysis and presentation, report formatting, efficient search techniques and online collaboration tools.

Unit I Information Technology Basics

(Lectures: 15, Practical Lab 2 Marks Th-30, Pr-1).

Information : Prerequisites of Information, Need for Information Technology and its advantages; Information Technology : Definition and components; Data : Definition, Types, Data Representation, Number system and Coding Schemes(ASCII and UNICODE); Parts of a Computer: CPU, Memory, Input/ Output Devices, Auxiliary Memory; Software – Definition, Relationship between Hardware and Software, Categories of Software, OS - definition & functions Role of Information Technology in : Business, Mobile Computing, Health Services, ,Public Sector, Media, Defence Services, Education and Publication.

Lab1

OS basic

Installation of Operating System (Demonstration only) , Demonstrate features of any MS Windows based OS or any of the Linux flavor , Identification of Directories , Setting up computer, Add a printer, Check device drivers, Installation software, Users and administrative rights for installation , Unicode, Enable computer to support regional language, add Keyboard, Use onscreen keyboard, install phonetic keyboard, type the national anthem using Unicode, Use online translators and transliteration services

Unit II Introduction to Data Handling, Processing and Analysis

(Lectures: 10, Practical Lab 06 Marks Th-10, Pr-10).

Word processing concepts: Use of Templates, Working with word document: Editing text, Find and replace text, Formatting, spell check, Autocorrect, Autotext, Bullets and numbering, Tabs, Paragraph Formatting, Indent, Page Formatting, Header and footer, Tables: Inserting, filling and formatting a table; Inserting Pictures and Video; Mail Merge: including linking with Database; Printing documents Creating Business Documents using the above facilities

Spreadsheet concepts: Managing worksheets; Formatting, Entering data, Editing, and Printing a worksheet; Handling operators in formula, Project involving multiple spreadsheets, Organizing Charts and graphs, Generally used Spreadsheet functions: Mathematical, Statistical, Financial, Logical, Date and Time, Lookup and reference, Database, and Text functions

Unit III Presentation Software

(Lectures: 05, Practical Lab 02 Marks Th-05, Pr-06).

Basics of presentations: Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols, Media; Design; Transition; Animation; and Slideshow. Creating Business Presentations using above facilities

Lab 2.1

Data capture using Google Forms

Create data forms to capture data for Event Registration, Event Feedback, Customer feedback/satisfaction on a product or service and Order Request.

Lab2.2

Report Formating using Word Processing

Draft an official letter for job interview invitation/ job appointment/ invitation to an business trade show event, use mail merge to input the recipients list linking with database.

Given a project report in PDF format transfer to word processor software and format to include title page, specified Paragraph and Page Formating (page size, orientation, line spacing, font type and font size, Indent, bullets, paragraph formatting) details, Acknowledgement page, Table of contents page, List of figures page, List of Tables page, bibliography, references, distinct

headers for each chapter, page numbering in roman for initial pages and normal from first chapter. The document should be checked for spelling errors and corrected appropriately.

Create/ Upload a document in a collaboration software like Google docs. Share and collaborate in real time, Safely store and organize your work, Control who can see your documents

Lab2.3

Spreadsheet

Working with worksheets -Entering data, Formatting, Editing, and Printing a worksheet, Formulas and Functions, Handling operators in formula, Generally used Spreadsheet functions

- Mathematical, Statistical, Financial, Logical, Date and Time, Lookup and reference, Database, and Text functions, Inserting Charts and graphs, Data Sorting and Filtering

Introduction to some more useful functions such as the IF, nested IF, VLOOKUP and HLOOKUP, construction of Pivot Tables to organize data, Creating spreadsheet in the area of: Loan and Lease statement; Ratio Analysis; Payroll statements; Capital Budgeting; Depreciation Accounting; Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression

Lab 2.4

Data Presentation using Presentation Software

Preparing presentation in areas such as Customer satisfaction/ feedback, product analysis, job satisfaction using the data obtained through data capture tool, including appropriate slide animation, sound recording, slide timings, customer feedback video. Export the presentation as video or save as slide show. Prepare handouts for audience.

Working with multimedia tools: Image manipulation - Use any image editing tool such as (GIMP, Inkspace) to design the cover page of Book; Audio manipulation - Use any two Mp3 tracks of your choice to create a unique two minute composition that is significantly different from either of the original tracks; Video manipulation - Make a Movie on a given topic with the help Windows Movie Maker.

Unit IV Internet Applications and Emerging Technologies

(Lectures: 15, Practical Lab 5 Marks Th-30, Pr-8).

Internet – role and importance, Web Browser, IP Addressing – Public Vs Private, Static Vs Dynamic; WWW & related protocols; Internet Applications.

Cloud Computing: Meaning, Features, & Service models – Infrastructure as a service, Advantages and disadvantages, Mobile Computing: Meaning, Business Applications of Mobile computing, Virtual reality & Augmented Reality: Meaning and applications, IOT - Internet of Things: Meaning & Application

Lab 3

Surfing the Internet, Use of Email and Search Engines

Advanced web search and translation services, Web search, image search, Search only for pages that contain (ALL the search terms contain the exact phrase you type, contain at least one of the words you type, do NOT contain any of the words you type, written in a certain language, created in a certain file format like ppt, pdf, rtf, doc, xls), Advanced search operators: Include search (“+” search), synonym search, OR search, Domain search, Numrange search, other advanced search features (Google, Local language, Technology Search, Date, Occurrences, Domains, Safe search), Multiuser ; Google docs: Create documents, spreadsheets and presentations online, Share and collaborate in real time, Safely store and organize your work, Control who can see your documents

Reference Books:

- 1. Introduction to Information Technology by ITL Education Solutions Limited, second edition.*
- 2. „O” Level made simple “Introduction to ICT resources” by Satish Jain, Shashank Jain, Shashi Singh & M. Geetha Iyer, BPB publication.*
- 3. Computer fundamentals fourth edition by Pradeep K. Sinha and Priti Sinha BPB publications*
- 4. Information Technology The breaking wave by Dennis Curtin Tata McGraw-hill edition*
- 5. Cloud Computing by Anandamurugan, T.Priyaa et al.*
- 6. Internet of Things: A Hands-On Approach by Arsheep Bahga*

Web references

- 1. www.moodle.org,*
- 2. www.wikipedia.org*