KARNATAK UNIVERSITY, DHARWAD
ACADEMIC (S&T) SECTION

ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಧಾರವಾಡ
ವಿದ್ಯಾಮಂಡಳ (ಎಸ್&ಟಿ) ವಿಭಾಗ

ಸ್ವಾತಂತ್ರ್ಯದ ಅಮೃತ ಮಹೋತ್ಸವ

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NAAC Accredited
'A' Grade 2014

website: kud.ac.in

No. KU/Aca(S&T)/JS/MGJ(Gen)/2024-25/ 612 Date: 27 JUL 2024

ಅಧಿಸೂಚನೆ

ವಿಷಯ: ಸರಕಾರದ ಆದೇಶ ದಿನಾಂಕ: 08.05.2024 ಅನುಸಾರ 2024–25ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಎಲ್ಲ ಸ್ನಾತಕ ಪದವಿಗಳಿಗೆ NEP ಅಡಿಯಲ್ಲಿ ಪ್ರೋಗ್ರಾಂ ವಿನ್ಯಾಸ (Curriculum Structure)ದಂತೆ ಪರಿಷ್ಕೃತ ಪಠ್ಯಕ್ರಮದ ಅನುಷ್ಠಾನ ಕುರಿತು.

ಉಲ್ಲೇಖ: 1. ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು, ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ ಇವರ ಆದೇಶ ಸಂಖ್ಯೆ: ಇಡಿ 166 ಯುಎನ್ಇ 2023, ದಿ: 08.05.2024.
2. ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ನಿರ್ಣಯಗಳ ಸಂ:2, 3, 4, 5, 6, 7, 8 & 9, ದಿ:16.07.2024.
3. ಮಾನ್ಯ ಕುಲಪತಿಗಳ ಅನುಮೊದನೆ ದಿನಾಂಕ: 27/07/2024

ಮೇಲ್ಕಾಣಿಸಿದ ವಿಷಯ ಹಾಗೂ ಉಲ್ಲೇಖಗಳನ್ವಯ, ಉಲ್ಲೇಖ–01ರ ಸರಕಾರ ಆದೇಶಾನುಸಾರ 2024–25ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಅನ್ವಯವಾಗುವಂತೆ, ಈ ಕೆಳಗಿನ ಎಲ್ಲ ಸ್ನಾತಕ ಪದವಿಗಳ NEP ಅಡಿಯ ಪ್ರೋಗ್ರಾಂ ವಿನ್ಯಾಸ (Curriculum Structure)ದಂತೆ ಪರಿಷ್ಕೃತ ಪಠ್ಯಕ್ರಮ ರಚನೆ ಕುರಿತಾಗಿ ಸಂಬಂಧಿಸಿದ ಅಭ್ಯಾಸಸೂಚಿ ಮಂಡಳಿ ಹಾಗೂ ನಿಕಾಯಗಳ ಶಿಫಾರಸ್ಸಿನಂತೆ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ಅನುಮೊದಿತ ಪದವಿಗಳ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಕ.ವಿ.ವಿ. ಅಂತರ್ಜಾಲ www.kud.ac.in ದಲ್ಲಿ ಭಿತ್ತರಿಸಲಾಗಿದೆ. ಸದರ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಕ.ವಿ.ವಿ. ಅಂತರ್ಜಾಲದಿಂದ ಡೌನಲೋಡ ಮಾಡಿಕೊಳ್ಳಲು ಸೂಚಿಸುತ್ತ ವಿದ್ಯಾರ್ಥಿಗಳು ಹಾಗೂ ಸಂಬಂಧಿಸಿದ ಎಲ್ಲ ಬೋಧಕರ ಗಮನಕ್ಕೆ ತಂದು ಅದರಂತೆ ಕಾರ್ಯಪ್ರವೃತ್ತರಾಗಲು ಕ.ವಿ.ವಿ.ಯ ಎಲ್ಲ ಅಧೀನ ಹಾಗೂ ಸಂಲಗ್ನ ಮಹಾವಿದ್ಯಾಲಯಗಳ ಪ್ರಾಚಾರ್ಯರುಗಳಿಗೆ ಸೂಚಿಸಲಾಗಿದೆ.

ಅ.ನಂ.		ಪದವಿ			ಸೆಮಿಸ್ಟರ್
1	1	B.A	8	BTTM	1 ರಿಂದ 6ನೇ ಸೆಮಿಸ್ಟರ್
	2	BSW	9	B.Sc	
	3	B.Sc. (H.M)	10	BCA	
	4	B.Com	11	B.Com (CS)	
	5	B.Com (E-Commerce Operation)	12	B.Com (Retail Operations)	
	6	B.Com (Banking Financial Services & Insurance)	13	B.Com (Logistics)	
	7	BBA	14	BBA (Logistics Management)	
2	1	B.Sc (Data Science)	2	B.Sc (Artificial Intellgence & Machinery Learning)	1 ಮತ್ತು 2ನೇ ಸೆಮಿಸ್ಟರ್
3	1	BASLP	3	BPA	1 ರಿಂದ 8ನೇ ಸೆಮಿಸ್ಟರ್
	2	BVA	4	B.Sc. Pulp & Paper	

ಅಡಕ: ಮೇಲಿನಂತೆ

ಕುಲಸಚಿವರು.

ಗೆ,
ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯದ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಬರುವ ಎಲ್ಲ ಅಧೀನ ಹಾಗೂ ಸಂಲಗ್ನ ಮಹಾವಿದ್ಯಾಲಯಗಳ ಪ್ರಾಚಾರ್ಯರುಗಳಿಗೆ. (ಕ.ವಿ.ವಿ. ಅಂರ್ತಜಾಲ ಹಾಗೂ ಮಿಂಚಂಚೆ ಮೂಲಕ ಬಿತ್ತರಿಸಲಾಗುವುದು)

ಪ್ರತಿ:
1. ಕುಲಪತಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು / ಕುಲಸಚಿವರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು / ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ) ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
2. ಅಧೀಕ್ಷಕರು, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ / ಗೌಪ್ಯ / ಜಿ.ಎ.ಡಿ. / ವಿದ್ಯಾಂಡಳ (ಪಿ.ಜಿ.ಪಿಎಚ್.ಡಿ) ವಿಭಾಗ, ಸಂಬಂಧಿಸಿದ ಕೋರ್ಸುಗಳ ವಿಭಾಗಗಳು ಪರೀಕ್ಷಾ ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
3. ನಿರ್ದೇಶಕರು, ಕಾಲೇಜು ಅಭಿವೃದ್ಧಿ / ವಿದ್ಯಾರ್ಥಿ ಕಲ್ಯಾಣ ವಿಭಾಗ / , ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
4. ನೊಡಲ್ ಅಧಿಕಾರಿಗಳು, ಯು.ಯು.ಸಿ.ಎಂ.ಎಸ್, ಘಟಕ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
5. ಎನ್.ಇ.ಪಿ. ನೊಡಲ್ ಅಧಿಕಾರಿಗಳು, ಸಿ.ಡಿ.ಸಿ. ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.

KARNATAK UNIVERSITY, DHARWAD

03- Year B.A. (Computer Applications)

Program

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SYLLABUS

Subject: Computer Application

[Effective from 2024-25]

DISCIPLINE SPECIFIC CORE COURSE (DSC) FOR SEM I – IV, SKILL ENHANCEMENT COURSE (SEC) FOR SEM IV/V/VI AND ELECTIVE COURSES FOR SEM V AND VI

As per NEP (Revised): 2024

B. A.(Computer Applications)
Academic Year 2024-25

Sem.	Type of Course	Theory/ Practical	Course Code	Subject Title	Credits	No. of hour per week Theory / Practical	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
I	DSC-1	Theory	C1CA1T1	C-Programming	4	4	3 hrs.	20	80	100
	DSC-2	Practical	C1CA1P1	C-Programming Lab	2	4	3 hrs.	10	40	50
II	DSC-3	Theory	C2CA1T1	Multimedia systems and Applications	4	4	3 hrs.	20	80	100
	DSC-4	Practical	C2CA1P1	Multimedia systems and applications Lab	2	4	3 hrs.	10	40	50
III	DSC-5	Theory	C3CA1T1	Coral Draw	4	4	3 hrs.	20	80	100
	DSC-6	Practical	C3CA1P1	Coral Draw Lab	2	4	3 hrs.	10	40	50

BA

Sem.	Type of Course	Theory/ Practical	Course Code	Subject Title	Credits	No. of hour per week Theory / Practical	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
IV	DSC-7	Theory	C4CA1T1	Page Maker	4	4	3 hrs.	20	80	100
	DSC-8	Practical	C4CA1P1	Page Maker Lab	2	4	3 hrs.	10	40	50
V	DSC-9A DSC-10A	Theory	C5CA1T1 C5CA1T2	1. Web programming 2. DBMS	4	4	3 hrs.	20	80	100
	DSC-9B DSC-10B	Practical	C5CA1P1 C5CA1P2	1.Web programming Lab 2.DBMS Lab	2	4	3 hrs.	10	40	50
	EC-1	Theory	C5CA5T1	E-Commerce	3	3	3 hrs.	20	80	100
VI	DSC-11A DSC-12A	Theory	C6CA1T1 C6CA1T2	1. Adobe Photoshop 2.Python Programming	4	4	3 hrs.	20	80	100
	DSC-11B DSC-12B	Practical	C6CA1P1 C6CA1P2	1. Adobe Photoshop Lab 2. Python Programming Lab	2	4	3 hrs.	10	40	50
	EC-2	Theory	C6CA5T1	Cyber Security and Cyber Laws	3	4	3 hrs.	20	80	100
IV/ V / VI	Skills	Practical	C4CA6T1	Computer Concepts & Office Automation	2	4	3 hrs.	10	40	50

* Student shall either DSC 9A and DSC 10A or DSC 9B and DSC 10B in 5th semester. Similarly, DSC 11A and DSC 12A or DSC 11B and DSC 12B in 6th semester.

** Student shall study Skill of this subject either in IV/ V / VI but not in all the semester.

Karnatk University, Dharwad

B. A. (Computer Applications)

ProgrammeSpecific Outcomes (PSO):

On completion of the 03 years Degree in Computer Application students will be able to:

- Demonstrate, solve and understand the major concepts of Computer Applications.
- Understand practical skills.
- To apply standard methodology to the solutions of problems in Computer Application
- Provide students with the ability to plan and carry out experiments independently and assess the significance of outcomes.
- Develop in students the ability to adapt and apply methodology to the solution of unfamiliar types of problems.
- Employ critical thinking and the scientific knowledge to design, carry out, record and analyse the results of Computer Applications.
- To build confidence in the candidate to be able to work on his own in industry and institution of higher education.
- To develop an independent and responsible work ethics.

B.A. Semester –I

Subject Title(Theory) :C – Programming

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C1CA1T1	DSC-1	Theory	04	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Theory), students will be able to:

CO 1: Familiarize with fundamental concepts and computer programming.

CO 2: Learn fundamental concepts of programming by developing and executing programs in C.

CO 3: Focuses on the structured program.

CO 4: Various constructs and their syntax.

Unit I: **15 hrs.**

Introduction to Programming Paradigms: Evolution of programming languages, Structured programming, Procedural programming, objectoriented programming, Functional programming and Logic programming, compilation process, object code, source code, executable code, fundamentals of algorithms, flow charts.

Unit II: **15 hrs.**

Fundamentals: C character set Identifiers & Keywords, data types, constants, variables and arrays, declarations, expressions, statements, symbolic constants

Data types: Properties of type and objects, data objects, variables and constants, data types, specification and implementations of elementary data types, declaration, type checking and type conversion, assignment and initialization, structured data types-vectors and arrays, records, lists, character strings, files and input-output.

Unit III: **15 hrs.**

Operators and Expressions: Arithmetic operators, unary operators, relational and logical operators, assignment operators, conditional operators, Library functions. **Control Statements**: Branching, Looping, Nested control structures, switch break, continue statements, comma operator, go to statement.

Unit IV: **15 hrs.**

Functions: Defining a function, accessing a function, function prototypes, passing arguments to a function, recursion.

Arrays: Defining and processing, one-dimensional Array, Multidimensional Array declaration and their applications, Passing arrays to a function.

Text Books:

1. Programming in ANSI C, E. Balaguruswamy, TMH Publications.
2. Computer Programming C.V. Rajmaman, PHI
3. Let us C - YashwantKanetkar, BPB Publications

References:

1. Kernighan& Ritchie, C Programming Language". The (Ansi C version), PHI, 2/0,1992
2. K.R Venugopal, "Mastering C", TMH, 2006

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :C – Programming Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C1CA1P1	DSC-2	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:
CO 1: Understand the basics of programming by executing the simple programming
CO 2: Be able to design & execution of code.
CO 3: Have practical knowledge of arrays, strings & functions

Programs List:

1. Write a program to find greatest of three numbers.

2. Write a program to find gross salary of a person

3. Write a program to find grade of a student given his marks.

4. Write a program to find divisor or factorial of a given number

5. Write a program to print first ten natural numbers.

6. Write a program to print first ten even and odd numbers

7 Write a program to find grade of a list of students given their marks.

8. Write a menu driven program for matrices to do the following operation depending on whether the operation requires one or two matrices

   a. Addition of two matrices

   b. Subtraction of two matrices

   c. Finding upper and lower triangular matrices

B.A. Semester –II

Subject Title(Theory) :Multimedia Systems and Applications

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C2CA1T1	DSC-3	Theory	04	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Theory), students will be able to:

CO 1: Understand different lossy and lossless compression algorithms.
CO 2: Understand the various transforms required to compress images and critically analyze their advantages and limitations.
CO 3: Analyze different audio, image and video compression standards and their advance features.

Unit I: 15 hrs.

Multimedia: Introduction to multimedia, components, uses of multimedia, multimedia applications, virtual reality.

Text: Fonts & Faces, Using Text in Multimedia, Font Editing & Design Tools, Hypermedia & Hypertext.

Images: Still Images - bitmaps, vector drawing, 3D drawing & rendering, natural light & colors, computerized colors, color palettes, image file formats.

Unit II: 15 hrs.

Sound: Digital Audio, MIDI Audio, MIDI vs Digital Audio, Audio File Formats.

Video: How video works, analog video, digital video, video file formats, video shooting and editing.

Unit III: 15 hrs.

Animation: Principle of animations, animation techniques, animation file formats.

Internet and Multimedia: www and HTML, multimedia on the web - web servers, web browsers, web page makers and site builders.

Unit IV: 15 hrs.

Making Multimedia: Stages of a multimedia project, Requirements to make good multimedia, Multimedia Hardware - Macintosh and Windows production Platforms, Hardware peripherals - Connections, Memory and storage devices, Multimedia software and Authoring tools.

References:

1. Tay Vaughan, "Multimedia: Making it work", TMH, Eighth edition, 2011
2. Ralf Steinmetz and KlaraNaharstedt, "Multimedia: Computing, Communications Applications", Pearson, 1996.
3. Keyes, "Multimedia Handbook", TMH. 2000
4. K. Andleigh and K. Thakkar, "Multimedia System Design", PHI.2000

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Multimedia systems and Applications Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C2CA1P1	DSC-4	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:

CO 1: Understand the basics of programming by executing the simple programming

CO 2: Be able to design objects.

CO 3: Have practical knowledge of animation.

CO 4: Have practical knowledge of masking.

Program List:

Practical exercises based on concepts listed in theory using Presentation tools in office automation tool/GIMP/Blender / Audacity/ Animation Tools/ Image Editors/ Video Editors.

Implement the followings using Blender -

1. Create an animation using the tools panel and the properties panel to draw the following- Line, pe, oval, circle, rectangle, square, pencil, brush, lasso tool
2. Create an animation using text tool to set the font, size, color etc.
3. Create an animation using **Free transform tool** that should use followings-
   Move Objects
   Skew Objects
   Stretch Objects
   Rotate Objects
   Stretch Objects while maintaining proportion
   Rotate Objects after relocating the center dot
4. Create an animation using layers having following features- Insert layer, Delete layer, guide layer, Mask layer.
5. Modify the document (changing background color etc.) using the following tools
   Eraser tool
   Hand tool
   Ink bottle tool
   Zoom tool
   Paint Bucket tool
   Eyedropper tool
6. Create an animation for bus car race in which both starts from the same point and car wins the race.
7. Create an animation in which text Hello gets converted into GoodBye (using motion/shape tweening).
8. Create an animation having five images having fade-in fade-out effect.
9. Create an scene to show the sunrise (using multiple layers and motion tweening)
10. Create an animation to show the ripple effect.
11. Create an animation (using Shape tweening and shape hints) for transforming one shape into another.
12. Create an animation for bouncing ball (you may use motion guide layer.)

B.A. Semester –III

Subject Title(Theory) :Coral Draw

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C3CA1T1	DSC-5	Theory	04	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Theory), students will be able to:

CO 1: Write action script for a particular problem.
CO 2: Design and Draw customized GUI components.
CO 3: Apply Transformations on Components.

Unit I: **15 hrs.**

Introduction to CorelDRAW: Use and importance in Designing, Various Graphic Files and File Extensions,Vector Image and Raster Images, Introduction to Screen and Work Area.

UnitII: **15 hrs.**

Introduction to Tools of CorelDRAW: Managing Palettes,Working with Images, Patterns and Textures,Working with Shapes,Colours and Fills,Image Rasterisation and Editing, Transformation Menu.

CorelDRAW Files: Coreldraw Files and supporting documents, Import and Export of Files and File formats Page Setup and Designing, Using Styles and Templates, Working with Text, Formatting Text, Text Attributes.

UnitIII: **15 hrs.**

Page Layout and Layers: Designing Different Page Layouts, Column Layout, Special Effect to Objects and Texts, Contour Tool,Layout for News Paper and Magazines, Working with Layers Hiding/Showing Layers - Deleting Layers, Masking Layers.

Unit–IV: **15 hrs.**

Printing and Customization: Preparation of Visiting Cards & Invitation Cards, Shaping Dockers & Logo Design Introduction Brochure & Books, Introduction to Magazine Designing, Web Photo GalleryPrinting.

References:

1. CorelDraw x5 Unleashed, Foster D. Coburn III
2. CorelDraw The Official Guide By Gary David Bouton
3. CorelDRAW Jesse Russell Ronald Cohn.
4. Corel Draw Graphics Suite X4 Training Guide - Corel Draw Version by Mc Sharma

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Coral Draw Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C3CA1P1	DSC-6	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:

CO 1: Create and manipulate objects.

CO 2: Outline, fill, and transform objects.

CO 3: Use layers and special effects.

CO 4: Create and edit images and text.

Program List:

1. Design triangles and decorative circles for the background using CorelDraw.
2. Adding colors to triangles and circles for the background using CorelDraw.
3. Creating the diamond shape and adding color to the diamond shape for the background using CorelDraw.
4. Adding coffee cup and adding banner to the logo using CorelDraw.
5. Create the background using rectangles and import the coffee cup logo using CorelDraw.
6. Create the text for the background of Coffee cup logo using CorelDraw.
7. Create the circles for the background of Coffee cup logo using CorelDraw.
8. Trace the bitmap using CorelDraw.
9. Replace the text from the object using CorelDraw.
10. Design 3D button with Ellipse tool, interactive fountain fill tool of CorelDraw Tools.
11. Design 3D looking text that can be used for heading or slide presentation using CorelDraw.
12. Design the Rainbow using CorelDraw.
13. Design the flower using CorelDraw.
14. Design the six sided star using CorelDraw.
15. Design the House using CorelDraw.
16. Design the car using CorelDraw.
17. Design Colorful Floral Logo in Corel Draw.
18. Design Logo design using color styles.
19. Design the Stars using Blending effect.
20. Create a Neon Tubing Type effect using CorelDraw.

B.A. Semester –IV

Subject Title(Theory) :Page Maker

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C4CA1T1	DSC-7	Theory	04	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Theory), students will be able to:

CO 1: Create Documents and Templates, add text into documents using various methods, and apply different formatting styles to characters and paragraphs.

CO 2: Import graphics, create objects using various tools, add effects to objects

Unit I: 15 hrs.

PageMaker Basics Starting PageMaker, about the work area, using the toolbox, working with palettes, viewing pages, working with text and graphics, moving between pages, adding and deleting pages, working with multiple open publications.

Unit II: 15 hrs.

Constructing a publication Creating and opening publication, naming and saving a publication, closing a publication, setting up pages, changing document setup options, setting up rulers, creating running headers and footers.

Unit III: 15 hrs.

Drawing tools and text tools Different drawing tools, text tools, character formatting, paragraph formatting, controlling windows and orphans, controlling page breaks, tabs and hyphenation, grid manager, printing a document, Importing Graphics Placing graphics, sizing and cropping graphics, OLE, Embedding an OLE object.

Unit IV: 15 hrs.

Master Pages Creating a master page, numbering pages, setting up ruler guides, applying master page design, Utilities Using a table editor, create keyline, bullets and numbering, creating PDF file with acrobat, story editor, spell checker.

References:

1. PageMaker 7, Training Guide-Satish Jain, BPB Publications.
2. PageMaker(R) 7: The Complete Reference By Carolyn Connally

3. Adobe PageMaker By Barnabas Crist Bal
4. Desktop Publishing Using PageMaker 6.0 Windows By Julia C. Bradley

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Page Maker Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C4CA1P1	DSC-8	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:
CO 1: Create and manipulate objects.
CO 2: Outline, fill, and transform objects.
CO 3: How to combine the text and graphics to produce documents
CO 4: Prepare newsletters, brochures, books, design logos, brochures etc.

Programs List:

1. Create a college Identity card
2. Create a wedding/invitation card
3. Create a pamphlet for any program to be conducted by an organization
4. Create a billing book
5. Create a newspaper report
6. Create your resume
7. Create a visiting card
8. Prepare various types of greeting card such as birthday card/ Diwali card etc
9. Design a Certificate
10. Type a Doc Using Story Editor
11. Newsletter Design (Page Layout Design
12. Design a Letter Head

Subject Title(Practical) :Computer Concepts & Office Automation

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C4CA6T1	Skill	Practical	02	04	3hrs	10	40	50

Course Outcomes (COs):At the end of the course, students will be able to:

CO1.Provide knowledge of different units of computer like processing unit, IO unit, and storage unit.

CO2.To earn knowledge of different types of memory.

CO3. Understand and apply the basic concepts of electronic spreadsheet software.

Co4. To make students well familiar with computer and networking fundamentals.

UnitI: 15hrs.

Basics: History and generations of Computer, Types of Computers, Organization of Computer System, Hardware and Software Components, **Memory unit:** Types of memory, ROM, RAM, types of RAM & ROM, Introduction to cache and virtual memory.

UnitII: **15 hrs.**

Number system: Binary Octal, Hexa-decimal, Number base conversion, Binary addition, Subtraction, One's and Two's compliment, Character codes – ASCII, EBCDIC.

UnitIII: 15 hrs.

Operating System: Types of operating system, Functions, Introduction to DOS and WINDOWS operating system.

Software: Types of languages, Types of software (System and Application software).

UnitIV: 15 hrs.

Network and Internet: History and evolution of Computer Network, Types of network (LAN, MAN & WAN), Internet and its applications.

Office Automation: Working with MS-Word, MS-Excel and MS-POWER POINT.

References:

1. Computer Concepts & C Programming, P.B.Kottur, Sapna Book House Bangalore 2009
2. Computer Fundaments, V. Rajaraman,Prentice Hall of India,2008
3. Computer Fundamental P.K. Sinha, Prentice Hall of India, 6th Edition,1992
4. Fundamentals of Information Technology second edition, Alexis Leon,2009
5. Microsoft Office-Complete reference,Curt Simmons, McGraw Hill,2003

Programs List:

1. Create a word document and set
   a) Left and right margin ⟶ 1.5”
   b) Landscape orientation
   c) Insert line numbers and page borders
   d) Header and Footer text
   e) Use spell check and grammar check
   f) Any formatting options (Bullets, Font, superscript, subscript, etc).
2. Design an invitation document using word art, clip art and auto shapes.
3. Create a document with a table as shown below.

Roll No.	Name	Subject Marks			Total
		English	Kannada	Hindi	

4. Write procedure to create company letter head.
5. Write procedures to create a memo in word.
6. Write procedures to create a resume.
7. Write procedure to create greeting card.
8. Write procedures to create a cover page of a project report.
9. Write procedures to create a mail merge letter.
10. Write procedures to create a macro for inserting a picture and formatting the text.
11. Write procedures to create a worksheet with 4 columns, enter 10 records and find the sum of all columns.
12. Write procedures to create a report containing the pay details of the employee in excel.
13. Write procedures to create a student result sheet in excel.
14. Write procedures to create a simple bar chart to highlight the sales of a company for 3 different periods in Excel.
15. Write procedures to create a pie chart for a sample data and give legends in Excel.
16. Use any five categories of functions available in Excel.
17. Write procedures to create a simple presentation to list simple dos commands, hardware, software.
18. Create a presentation for introduction to computers using template.
19. Explain the features of any product using transition effects in the presentation.
20. Create a presentation to introduce your institute using action buttons and organization chart.

B.A. Semester –V

Subject Title(Theory) :Web programming

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C5CA1T1	DSC-9A	Theory	04	04	3hrs	20	80	100

Course Outcome: At the end of the course, students will be able to:

CO 1: Beacquaintedwith elements,TagsandbasicstructureofHTMLfiles.

CO 2: Developtheconceptofbasicandadvancedtextformatting.

CO 3: PracticetheuseofmultimediacomponentsinHTMLdocuments.

CO 4: Designingofwebpage-DocumentLayout,WorkingwithList,WorkingwithTables.

CO 5: PracticeHyperlinking,Designingofwebpage-WorkingwithFrames, FormsandControls.

CO 6: Preparecreatingstylesheet,CSSproperties,Background,Text, Fontandstylingetc.

CO 7: WorkingwithList,HTMLelementsbox,PositioningandBlockpropertiesinCSS.

Total Hrs.: 60

Unit I: 15 hrs.

WebDesignPrinciples: Basicprinciplesinvolvedindevelopingawebsite, Planningprocess, FiveGoldenrulesofwebdesigning, Designingnavigationbar, Pagedesign, HomePageLayout, DesignConcept.

BasicsinWebDesign: BriefHistoryofInternet, Whatis WorldWideWeb, Whycreateawebsite, WebStandards, Audiencerequirement.

Unit II: 15 hrs.

IntroductiontoHTML: WhatisHTML, HTMLDocuments, BasicstructureofanHTMLdocument, CreatinganHTMLdocument, MarkupTags, Heading-Paragraphs, LineBreaks, HTMLTags.

ElementsofHTML: IntroductiontoelementsofHTML, WorkingwithText, WorkingwithLists,TablesandFrames, WorkingwithHyperlinks,ImagesandMultimedia, WorkingwithFormsandcontrols.

Unit III: 15 hrs.

IntroductiontoCascadingStyleSheets: ConceptofCSS, CreatingStyleSheet, CSSProperties, CSSStyling(Background,TextFormat,ControllingFonts), Workingwithblockelementsandobjects, WorkingwithListsandTables, CSSIdandClass, BoxModel(Introduction,Borderproperties,PaddingProperties,Marginproperties), CSS Advanced(Grouping, Dimension, Display,Positioning,Floating,Align, Pseudoclass,NavigationBar,ImageSprites,Attributesector), CSSColor, CreatingpageLayoutandSiteDesigns.

Unit IV: 15 hrs.

XML: Introduction to XML, Defining XML tags, their attributes and values, Document type definition,XMLSchemas, Document Objectmodel, XHTML ParsingXMLData-DOMandSAXparsersinjava.

IntroductiontoWebPublishingorHosting: CreatingtheWebSite, Savingthesite, Workingonthewebsite, Creatingwebsitestructure, CreatingTitlesforwebpages, Themes-Publishingwebsites.

TextBooks:

1. KogentLearningSolutionsInc, HTML5insimplesteps, DreamtechPress,
2. Abeginner'sguidetoHTML, NCSA,14th May,2003
3. Murray,Tom/Lynchburg , CreatingaWebPageandWebSite College,2002
4. Murray,Tom/Lynchburg, CreatingaWebPageandWebSite, College,2002

ReferenceBooks:

1. WebDesigning&Architecture-Educational TechnologyCentre, UniversityofBuffalo
2. StevenM.Schafer HTML,XHTML,andCSSBible,5ed, WileyIndia
3. JohnDuckett, BeginningHTML,XHTML,CSS,and JavaScript, WileyIndia
4. IanPouncey,Richard York, BeginningCSS:CascadingStyleSheetsfor WebDesign ,WileyIndia
5. KogentLearning, WebTechnologies:HTML,Javascript, WileyIndia

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Web programming Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C5CA1P1	DSC-9B	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:
CO 1: Develop web pages using HTMLand Cascading Styles Sheets
CO 2: Develop a dynamic web pages (client side programming)
CO 3: Develop a Program using XML.

Programs List:

1. Acquaintancewithelements,Tagsandbasicstructureof HTMLfiles.
2. Practicingbasicandadvancedtextformatting.
3. Practicinguseofmultimediacomponents(Image,Video& Sound)inHTMLdocument.
4. Designingofwebpage-DocumentLayout.
5. Designingofwebpage-WorkingwithList.
6. Designingofwebpage-WorkingwithTables.
7. PracticingHyperlinkingofwebpages.
8. Designingofwebpage-WorkingwithFrames.
9. Designingofwebpage-WorkingwithFormsandControls.
10. Acquaintancewithcreatingstylesheet,CSSpropertiesand styling.
11. WorkingwithBackground,TextandFontproperties.
12. WorkingwithListproperties
13. Working with HTML elements box properties in CSS
14. Working with Positioning and Block properties in CSS
15. Designing with cascading stylesheet-Internal stylesheet
16. Designing with cascading stylesheet-External stylesheet

Subject Title(Theory) :Database Management System

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C5CA1T1	DSC-10A	Theory	04	04	3hrs	20	80	100

Course Outcomes (COs): At the end of the course, students will be able to:

CO 1: Explain the various database concepts and the need for database systems.

CO 2: Identify and define database objects, enforce integrity constraints on a database using DBMS.

CO 3: Demonstrate a Data model and Schemas in RDBMS.

CO 4: Identify entities and relationships and draw ER diagram for a given real-world problem.

CO 5: Convert an ER diagram to a database schema and deduce it to the desired normal form.

CO 6: Formulate queries in Relational Algebra, Structured Query Language (SQL) for database manipulation.

CO 7: Explain the transaction processing and concurrency control techniques

Total 60 hrs.

Unit I: 15 hrs.

Introduction: Database and Database Users, Characteristics of the Database Approach, Different People behind DBMS, Implication of Database Approach, Advantages of Using DBMS, When not to use a DBMS.

Database System concepts and Architecture: Data Models, Schemas and Instances, DBMS Architecture and Data Independence, Data Base Languages and interfaces, The Database System environment, Classifications of Database Management Systems.

Data Modeling Using The Entity Relation Model: High Level Conceptual Data Models for Database Design With an Example, Entity Types Entity sets, Attributes, and Keys, ER-Model Concepts, Notations fro ER Diagrams, Proper Naming of Constructs, Relationships Types of Degree than two.

Unit II: 15 hrs.

Relational Data Model and Relational Algebra: Relational Model Concepts, Relational Model Constraints and Relational Database Schema, Defining Relations, Update Operations on Relations and constraint violations, Basic Relational Algebra Operations, Additional Relational Operations. Queries in relational algebra using all the operations.

Unit III: 15 hrs.

Functional Dependencies and Normalization for Relational Databases: Informal Design Guidelines for Relational Schemas,Functional Dependencies, Normal Forms Based on primary Keys, General Definitions of Second And Third Normal Forms, Boyce-Codd Normal Form.

Relational Database Language: Data definition in SQL-Queries in SQL,INSERT, DELETE,UPDATE Statements SQL,

Data Types in SQL: Number Types, Character Type, NSL Character Types.

Unit IV: **15 hrs.**

Components of SQL: Data Definition Language (DDL), Data Manipulation Language (DML), Query Language (QL), Data Control Language (DCL), **Set Operations:** Union, Intersection, Minus, Renaming of Tables. **SQL Operations:** Logical Operators (NOT IN, ALL, ANY, EXIST, NOT EXIST, LIKE, NOT LIKE, IS NULL, IS NOT NULL, AND, OR, NOT) **SQL Functions:** Number Functions, Character Functions, Date Functions, Aggregate Functions.**Integrity Constraints:** Advantages of Integrity Constraints, Primary Key, Unique Key, Super Key, Candidate Key, Composite Key, Foreign Key, Domain Constraint, Key ConstraintsVIEWS in SQL, Specifying general Constraints and assertions.

Text Books:

1. Elmasri&Navathe, Fundamentals of Database System (4ed), Pearson Education, 2003.
2. Sundarraman, Oracle 9i Programming a Primer,(1ed), Pearson Education.

Reference Books:

1. Kahate,Introductions to Database Management Systems, Pearson Education, 2004.
2. Abrahamsisilberschatag, Henry. F.Korth, S. Sudarshan, Database Systems Concepts, McGraw Hill.
3. Jefry. D. Ullaman, Principles of Database System. Oracle Press: ORACLE-Complete Reference.
4. C.J.Date, Introductins to Database Systems, (6ed) Addison Wesley, 1995.
5. Raghu Ram Krishnan, Database Management Systems, Second Edition,Mc.Graw Hill.2000.

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Database Management System Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C5CA1P1	DSC-10B	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:

CO 1: Students get practical knowledge on designing and creating relational database systems.

CO 2: Understand various advanced queries execution such as relational constraints, joins, set operations, aggregate functions, views.

Programs :

1. A) Create the following relation for the student :

Student (regno: string , name : string, class :string, bdate: date, marks1:int, marks1:int, marks2:int, marks3:int)

i. Enter atleast five tuples of the above relation
ii. Demonstrate the usage of following clauses for the above relation
   a. Where c. Having
   b. Order By d. Group By
iii. Demonstrate the usage of following clauses for the above relation
   a. Sum c. Count e. Between
   b. Avg d. Like f. Max & Min
iv. Demonstrate the rollback and commit command for the above relation

B) Consider the following database that maintain information about employees & Departments.

Employee(empid: int, ename:string, age:int, salary:int, #deptno:int)
Department(deptno:int, dname: string, #manager-id: int)

i. Create the above tables by properly specifying the primary keys & foreign keys.
ii. Enter at least 5 tuples for each relation.
iii. Display emp-id &emp name whose salary lies between 10,000 and 50,000.
iv. List empname& salary for all the employee working for CS Dept.
v. Display empname&deptname for all the managers.

2. Consider the following schema for OrderDatabase:
SALESMAN (Salesman_id, Name, City, Commission)
CUSTOMER (Customer_id, Cust_Name, City, Grade,Salesman_id)
ORDERS (Ord_No, Purchase_Amt, Ord_Date, #Customer_id, Salesman_id)
Write SQL queries to

i. Count the customers with grades above Bangalore'saverage.
ii. Find the name and numbers of all salesmen who had more than onecustomer.
iii. List all salesmen and indicate those who have and don't have customers in their cities (Use UNION operation.)
iv. Create a view that finds the salesman who has the customer with the highest order of a day.
v. Demonstrate the DELETE operation by removing salesman with id 1000. All hisorders must also bedeleted.

3. Consider the Insurances database given below. The primary keys are underlined and the data types are specified.

PERSON (DRIVER-ID#: string, name: string, address: string)
CAR (Regno: string, model: string, year: int)
ACCIDENT (report-number: int, date: date, location: string)
OWNS (#driver-id: string, #Regno: string)
PARTICIPATED (#driver-id: string, #Regno: string, #report-number: int, Damage amount: int)

i. Create the above tables by property specifying the primary keys and the foreign keys.
ii. Enter atleast five tables for each relation.
iii. Demonstrate how you

a. Update the damage amount for the car with a specific Regno in the accident with report number 12 to 25000.
b. Add a new accident to the database.

iv. Find the total number of people who owned cars that were involved in accidents in 2002.
v. Find the total number of accidents in which cars belonging to a specific model were involved

4. The following tables are maintained by a book dealer.

AUTHOR (author-id:int, name: string, city: string, country: string)
PUBLISHER (publisher-id: int, name: string, city: string, country: string)
CATALOG (book-id: int, title: string, author-id#: int, publisher-id#: int, category-id#: int, year: int, price: int)
CATEGORY (category-id: int, description: string)
ORDER-DETAILS (order-no: int, #book-id: int, quantity: int)

i. Create the above tables by properly specifying the primary keys and the foreign keys.
ii. Enter atleast five tuples for each relation.
iii. Give the details of the authors who have 2 or more books in the catalog and the price of the books is greater than the average price of the books in the catalog.
iv. Find the author of the book, which has maximum sales.
v. Demonstrate how you increase the price of books published by a specific publisher by 10%.

5. Consider the following database of student enrolment in courses and books adopted each course.

STUDENT (regno: string, name: string, major: string, bdate: date)
COURSE (course: int, cname: string, dept: string)

ENROLL (#regno: string, course#: int, sem:int marks: int)
TEXT (book-ISBN: int, book-title: string, publisher: string, author: string)
BOOK_ADOPTION (course#: int, sem: int, book-ISBN#: int)

a. Create the above tables by properly specifying the primary keys and the foreign Keys.

i. Enter atleast five tuples for each relation.

ii. Demonstrate how you add a textbook to the database and make this book be adapted by some department.

iii. Produce list of textbooks (include Course#, Book-ISBN, Book-title) in the alphabetical order for courses offered by the CS department that use more than two books.

iv. List any department that has its adopted books published by a specific publisher.

6. Consider the following database for library management system

BOOK (Book_id, Title, Publisher_Name, Pub_Year)
BOOK_AUTHORS (#Book_id, Author_Name)
PUBLISHER (Name, Address, Phone)
BOOK_COPIES (#Book_id, #Branch_id, No-of_Copies)
BOOK_LENDING (#Book_id, #Branch_id, Card_No, Date_Out, Due_Date)
LIBRARY_BRANCH (Branch_id,Branch_Name, Address)

Write SQL queries to

i. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch,etc.

ii. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun2017

iii. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation.

iv. Create a view of all books and its number of copies that are currently available in the Library.

7. Consider the schema for CompanyDatabase:

EMPLOYEE (SSN, Name, Address, Sex, Salary, #SuperSSN, DNo)
DEPARTMENT (DNo,DName, MgrSSN, MgrStartDate)
DLOCATION (#DNo,DLoc)
PROJECT (PNo, PName, PLocation, #DNo) WORKS_ON (#SSN,#PNo, Hours)

Write SQL queries to

i. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls theproject.

ii. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percentraise.

iii. Find the sum of the salaries of all employees of the 'Accounts' department,

as well as the maximum salary, the minimum salary, and the average salary in this department.

iv. Create a view with columns dept name and dept location. Display name of dept located in 'Dharwad' on this view.

Note : 1. All the experiments are to be carried out using MySql.
2. Draw ER diagram and Schema diagram for each lab program.

Subject Title(Theory) :E-Commerce

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C5CA5T1	EC-1	Theory	03	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Theory), students will be able to:

CO 1: Understand the basic concepts and technologies used in the field of management information systems.

CO 2: Have the knowledge of the different types of management information systems

CO 3: Understand the processes of developing and implementing information systems

CO 4: Be aware of the ethical, social, and security issues of information systems;

Unit I: 15 hrs.

E-commerce and its Technological Aspects: Consumer Oriented E Commerce Overview of developments in Information Technology and Defining E-Commerce: The scope of E commerce, Electronic Market, Electronic Data Interchange, Internet Commerce, Benefits and limitations of E-Commerce, Produce a generic framework for E-Commerce, Architectural framework of Electronic Commerce, Web based E Commerce Architecture.

Unit II: 15 hrs.

Consumer Oriented E Commerce: Overview of developments in Information Technology and Defining E-Commerce: The scope of E commerce, Electronic Market, Electronic Data Interchange, Internet Commerce, Benefits and limitations of E-Commerce, Produce a generic framework for E-Commerce, Architectural framework of Electronic Commerce, Web based E Commerce Architecture. SYLLABUS E-Retailing: Traditional retailing and e retailing, Benefits of e retailing, Key success factors, Models of e retailing, Features of e retailing. E services: Categories of e-services, Web-enabled services, matchmaking services, Information-selling on the web, e entertainment, Auctions and other specialized services. Business to Business Electronic Commerce.

Unit III: 15 hrs.

Electronic Data Interchange: Benefits of EDI, EDI technology, EDI standards, EDI communications, EDI Implementation, EDI Agreements, EDI Security. Electronic Payment Systems, Need of Electronic Payment System: Study and examine the use of Electronic Payment system and the protocols used, Study Electronic Fund Transfer and secure electronic transaction protocol for credit card payment. Digital economy: Identify the methods of payments on the net - Electronic Cash, cheques and credit cards on the Internet.

Unit IV: **15 hrs.**

Security in E Commerce: Electronic Data Interchange: Benefits of EDI, EDI technology, EDI standards, EDI communications, EDI Implementation, EDI Agreements, EDI Security. Electronic Payment Systems, Need of Electronic Payment System: Study and examine the use of Electronic Payment system and the protocols used, Study Electronic Fund Transfer and secure electronic transaction protocol for credit card payment. Digital economy: Identify the methods of payments on the net - Electronic Cash, cheques and credit cards on the Internet.

Issues in E Commerce: Threats in Computer Systems: Virus, Cyber Crime Network Security: Encryption, Protecting Web server with a Firewall, Firewall and the Security Policy, Network Firewalls and Application Firewalls, Proxy Server. Credits: 4 Suggested Reading: Understanding Ethical, Social and Political issues in E-Commerce: A model for Organizing the issues, Basic Ethical Concepts, Analyzing Ethical Dilemmas, Candidate Ethical principles Privacy and Information Rights: Information collected at E-Commerce Websites, The Concept of Privacy, Legal protections Intellectual Property Rights: Types of Intellectual Property protection, Governance.

References:

1. Elias. M. Awad, " Electronic Commerce", Prentice-Hall of India Pvt Ltd.
2. Ravi Kalakota, Andrew B. Whinston, "Electronic Commerce-A Manager's guide", Addison-Wesley.
3. Efraim Turban, Jae Lee, David King, H.Michael Chung, "Electronic Commerce-A Managerial Perspective", Addison-Wesley.
4. Elias M Award, Electronic Commerce from Vision to Fulfilment", 3 Edition, PHI.
5. Judy Strauss, Adel E-Ansary, Raymond Frost, "E-Marketing", 3RDEdition, Pearson Education

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

B.A. Semester –VI

Subject Title(Theory) : Adobe Photoshop

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C6CA1T1	DSC-11A	Theory	04	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Theory), students will be able to:

CO 1: Perform basic to intermediate image correction to existing images
CO 2: Enhance images using advance editing tools to create magazine covers
CO 3: Work with the Type tools and panels to type, insert and manage text

Unit I: **15 hrs.**

Photoshop Environment: Raster and Vector graphics, Photoshop environment Elements, navigation in Photoshop,
Sizing Images: Image size and Resolution, Cropping.

Unit II: **15 hrs.**

Selecting Image Areas: The rectangular and Elliptical Marquee tool, the lasso tools, saving selections, The magic wand tool, The magnetic lasso tool, modifying selections,
Layers: Floating versus fixed selections, undoing previous step, copying selection, creating layers, transforming layers, copying layers between images, arranging layers, saving images in Photoshop format.

Unit III: **15 hrs.**

Blending and Compositing:Defringing, Opacity and blending Modes, Color modes.
Image Modes: Mode characteristic, Grayscale and Bitmap Modes, color modes.

Unit IV: **15 hrs.**

Color and Painting: Selecting colors, Painting tools, and the clone stamp tool.
Text, Layer effects, and filters: Text, Layer effects, filters, Merging and Flattening Layers.**Adjusting Images**: Brightness/Contrast., Levels, Adjustment Layers, Toning Tools, Hue/Saturation

References:

1. Photoshop 7 Savvy, Steve Romaniello, BPB Publication

2. Photoshop 7: The Complete Reference By Laurie Ulrich-Fuller
3. The Adobe Photoshop Layer By Richard Lynch
4. Introduction To Adobe Photoshop By Abigail J Morley

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Adobe Photoshop Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C6CA1P1	DSC-11B	Practical	02	04	3hrs	10	40	50

Course Outcome (CO): After completion of course (Practical), students will be able to:
CO 1: Work with layers and masks to manage your projects efficiently
CO 2: Create composite images using multiple images

Programs List:

1. Design a passport size photo
2. Custom shapes creation
3. Merge two pictures into one Photoshop image
4. Convert color photo to black and white photo
5. Change the background in Photoshop
6. Apply filters and Effects to a photo
7. Removing a facial blemishes/mole.
8. Create a banner
9. Procedure to adjust the brightness and contrast of the picture so that it gives elegant look.
10. Calculate an animated GIF in Photoshop.

Subject Title(Theory) : Python Programming

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C6CA1T1	DSC-12A	Theory	04	04	3hrs	20	80	100

Course Outcome (CO): After completion of course (Practical), students will be able to:

CO 1: Explain the basic concepts of Python Programming.
CO 2: Demonstrate proficiency in the handling of loops and creation of functions.
CO 3: Identify the methods to create and manipulate lists, tuples and dictionaries.
CO 4: Discover the commonly used operations involving file handling.
CO 5: Interpret the concepts of Object-Oriented Programming as used in Python

Total 60 hrs.

UnitI: **15 hrs.**

Introduction: Installing Python, Simple program using Python, Expressions and Values,Variables and Computer, Memory, error detection, multiple line statements, Designing and using functions, functions provided by Python, Tracing function calls in memory model, omitting return statement. Working with Text: Creating Strings of Characters, Using Special Characters in Strings, Creating a Multiline String, Printing Information, Getting Information from the Keyboard, A Boolean Type, Choosing Statements to Execute, Nested If Statements, remembering the Results of a Boolean Expression Evaluation.

UnitII: **15 hrs.**

A Modular Approach to Program Organization: Importing Modules, Defining Your Own Modules, Testing Code Semi Automatically Grouping Functions Using Methods: Modules, Classes, and Methods, Calling Methods the Object-Oriented Way, Exploring String Methods, Underscores, Storing Collections of Data Using Lists: Storing and Accessing Data in Lists, modifying Lists, Operations on Lists, Slicing Lists, Aliasing, List Methods, Working with a List of Lists.

UnitIII: 15 hrs.

Repeating Code Using Loops: Processing Items in a List, Processing Characters in Strings, Looping, Over a Range of Numbers, Processing Lists Using Indices, Nesting Loops in Loops, Looping Until a Condition Is Reached, Repetition Based on User Input, Controlling Loops Using Break and Continue. Reading and Writing Files: Kinds of files, Opening a File, Techniques for Reading Files, Files over the Internet, Writing Files, and Writing Algorithms That Use the File-Reading Techniques, Multiline Records.

UnitIV: **15 hrs.**

Storing Data Using Other Collection Types: Storing Data Using Sets, Storing Data Using Tuples, Storing Data Using Dictionaries, Inverting a Dictionary, Using the In Operator on Tuples, Sets, and Dictionaries, Comparing Collections. Collection of New Information Object-Oriented Programming: Understanding a Problem Domain, Function "Isinstance", Class Object, and Class Book, writing a Method in Class Book.

Plugging into Python Syntax: More Special Methods. Creating Graphical User interface: Building a Basic GUI, Models, Views, and Controllers, Customizing the Visual Style Introducing few more Widgets, Object-Oriented GUIs, Keeping the Concepts from Being a GUI Mess.

References:

1. Think Python How to Think Like a Computer Scientist, Allen Downey et al., 2nd Edition, Green Tea Press. Freely available online @ https://www.greenteapress.com/thinkpython/thinkCSpy.pdf, 2015.
2. Introduction to Python Programming, Gowrishankar S et al., CRC Press, 2019.
3. Python Data Analytics: Data Analysis and Science Using Pandas, matplotlib, and the Python Programming Language, Fabio Nelli, Apress®, 2015
4. Advance Core Python Programming, MeenuKohli, BPB Publications, 2021.
5. Core PYTHON Applications Programming, Wesley J. Chun, 3rd Edition, Prentice Hall, 2012.
6. Automate the Boring Stuff, Al Sweigart, No Starch Press, Inc, 2015.
7. Data Structures and Program Design Using Python, D Malhotra et al., Mercury Learning and Information LLC, 2021.
8. http://www.ibiblio.org/g2swap/byteofpython/read/
9. https://docs.python.org/3/tutorial/index.html

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

Subject Title(Practical) :Python Programming Lab

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C6CA1P1	DSC-12B	Practical	02	04	3hrs	10	40	50

Course Outcomes (COs): At the end of the course, students will be able to:

CO1: To demonstrate different number data types in Python.

CO2: Perform different Arithmetic Operations on numbers in Python.

CO3: Ability to explore python especially the object-oriented concepts, and the built in objects of Python

CO4: To be able to introduce core programming basics and program design with functions using Python programming language

Program List:

1. a. Write a python program to print "Hello Python" b. Write a python program to do arithmetical operations
2. Write a python program to find the area of a triangle
3. Write a python program to solve quadratic equation
4. Write a python program to swap two variables
5. Write a python program to convert Celsius to Fahrenheit
6. Write a python Program to Check if a Number is Odd or Even
7. Write a python Program to Print all Prime Numbers in an Interval
8. Write a python Program to Find the Factorial of a Number
9. Write a python Program to Display the multiplication Table
10. Write a python Program to Multiply Two Matrices
11. Write a python Program to Find LCM & GCD using functions
12. Write a python program to read a word and print the number of letters, vowels in the word.
13. Write a python program to input an array of n numbers and find separately the sum of positive numbers and negative numbers.
14. Write a python program to search an element using linear equation.
15. Write a python program to search an element using binary search
16. Write a python program to insert a number in a sorted array.
17. Write a python program to stimulate stack operation.
18. Write a python program to draw shapes & GUI controls.
19. Write a python programs to using the built-in methods of the string, list and dictionary classes.

20. Write a python program to demonstrate exception handling

Subject Title(Theory) :Cyber Security and Cyber Laws

Course code	Type of Course	Theory / Practical	Credits	Instruction hour per week	Duration of Exam	Formative Assessment Marks	Summative Assessment Marks	Total Marks
C6CA5T1	EC-2	Theory	03	04	3hrs	20	80	100

Course Outcomes (COs): At the end of the course, students will be able to:

CO1.Develop cyber security strategies and policies.
CO2. Knowledge of Cyber World and Cyber Law in general.
CO3. The various aspects of cybercrimes.
CO4.Understanding the problems relating to e-commerce transactions.
CO5. Intellectual Property issues in IT Act.

Unit I: 15 hrs.

Digital Crime: Overview of digital crime, criminology of computer crime.Information Gathering Techniques: Tools of the attacker, information and cyber warfare, scanning and spoofing, password cracking, malicious software, session hijacking.

Unit II: 15 hrs.

Risk analysis and Threat: risk analysis, process, key principles of conventional computer security, security policies, authentication, data protection, access control, internal vs external threat, security assurance, passwords, authentication, and access control, computer forensics and incident response.

Unit III: 15 hrs.

Introduction to Cryptography and Applications: Important terms,Threat, Flaw, vulnerability, exploit, attack, ciphers, codes, substitution cipher (caeser), Transposition cipher (Rail-Fence),Public keycryptography (definition only) , Private key Cryptography (Definition and Examples) , Cyber forensics, Stenography.

Unit IV: 15 hrs.

Safety Tools and Issues: Firewalls, logging and intrusion detection systems, Windows and windows XP/NT security, UNIX/LINUX security, ethics of hacking and cracking.

Cyber Laws to be covered as per IT 2008:

Digital Signature and Electronic Signature, Digital Certificate

i. [Section 43] Penalty and compensation for damage to computer etc.

ii. [Section 65] Tampering with computer source documents
iii. [Section 66A] Punishment for sending offensive messages through communication service etc.
iv. [Section 66B] Punishment for dishonestly receiving stolen computer resource or communication device
[Section 66C] Punishment for identity theft
v. [Section 66D] Punishment for cheating by impersonation by using computer resource vii. [Section 66E] Punishment for violation of privacy
vi. [Section 66F] Punishment for cyber terrorism
vii. [Section 67] Punishment for publishing or transmitting obscene material in electronic form
viii. [Section 67A] Punishment for publishing or transmitting of material containing sexually explicit act, etc. in electronic form
ix. [Section 67B] Punishment for publishing or transmitting of material depicting children in sexually explicit act, etc. in electronic form
x. [Section 72] Breach of confidentiality and privacy.

References:

1. Merkow, M., &Breithaupt, J.(2005) Information Security Principles and Practices. 5th edition.
2. Snyder, G.F. (2010). Network Security, Cengage Learning.
3. Basta, A., &Halton, W., (2010) Computer Security: Concepts, Issues and Implementation,Cengage Learning India.
4. Anderson, R. (2008) Security engineering: A guide to building dependable DistributedSystems. 2nd edition. John Wiley & Sons.

Formative Assessment for Theory	
Assessment Occasion/ type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	20
Formative Assessment as per guidelines	

B.A. programme(DSC / EC) : 2024-25

GENERAL PATTERN OF **THEORY** QUESTION COURSE FOR **DSC/ EC /AECC**

(80 marks for semester end Examination with 3 hrs duration)

Part-A

1. Question number 1-05 carries 2 marks each. : 10 marks

Part-B

2. Question number 06- 15 carries 05Marks each. Answer any 08 questions : 40 marks

Part-C

3. Question number 16-19 carries 10 Marks each. Answer any 03 questions : 30 marks

(Minimum 1 question from each unit and 10 marks question may have

sub questions for 7+3 or 6+4 or 5+5 if necessary)

Total: 80 Marks

Note: Proportionate weight age shall be given to each unit based on number of hours Prescribed