West Bengal State Council of Technical & Vocational Education and Skill Development
(Technical Education Division)

Reduced Draft Syllabus
of

Diploma in Computer Science & Engineering

Part-III (6th Semester)

Only for Academic Session 2021 - 2022

West Bengal State Council of Technical Education
(A Statutory Body under West Bengal Act XXI of 1995)
Kolkata Karigori Bhavan, 2nd Floor, 110 S. N. Banerjee Road, Kolkata - 700 013.

Duration of this syllabus will be for 2 and half months. Teachers are hereby strictly requested to set the Questions as per the Syllabus given below which will be applicable for this semester only.

****Project work will be continued in 6th Semester as it is.**

Format for Syllabus

Name of the Course:Computer Engineering Group (Advanced Java Programming)		
Course Code: CST/6/601		Semester: SIXTH
Duration:		Maximum Marks:100+100
Teaching Scheme		Examination Scheme
Theory: 3 hrs./week		Mid Semester Exam.: 20 Marks
Tutorial: hrs./week		Assignment & Quiz: 10 Marks
Practical: 4 hrs./week		End Semester Exam.: 70 Marks
Credit: 3+2		Practical 50 (int) + 50 (ext)
Aim:		
Sl. No.		
1.	To learn how to design web based application.	
2.	To catch approach of Object Oriented Programming for building software.	
3.		
Objective:		
Sl. No.	Students will able to:	
1.	Create network based applications.	
2.	Create business applications.	
3.	Implement Server side programming.	
4.	Develop dynamic software components.	
5.	Develop database application.	
6.	Design and develop powerful GUI based components.	
7.	Create Animation using Applet, Thread and AWT controls.	
8.	Make best use of facilities that computer systems offer them for solving problems.	
9.		

Pre-Requisite:

Sl. No.	
1.	Basic knowledge of programming.
2.	Knowledge of C & C++ and JAVA languages.
3.	Familiar with object oriented programming.

Contents (Theory)		Hrs./Unit	Marks
Unit: 1	**Introduction the Advanced Web Technology: (AWT)** 1.1 Working with Windows and AWT AWT classes, Windows Fundamentals Working with frame windows Creating a frame window in applet Creating windowed program, Display information within a window 1.2 Working with graphics,working with color Setting the paint mode, Working with Fonts, managing text output using Font Metrics Exploring text & graphics. 1.3 Using AWT Controls, Layout Managers and Menus Control Fundamentals, Labels, Using Buttons Applying Check Boxes,Checkbox Group Choice Controls Using Lists, Managing scroll Bars Using a Text Field Using a Text Area, Understanding Layout Managers, Menu Bars and Menu Dialog Boxes, File Dialog 1.4 Handling events by Extending AWT Components Exploring the Controls.	10	
Unit: 2	**Networking:** 2.1 Basics Socket overview, client/server, reserved sockets, proxy servers, internet addressing. 2.2 Java & the Net The networking classes & interfaces 2.3 Inet address Factory methods, instance method 2.4 TCP/IP Client Sockets.	10	
Unit: 3	**The Tour of Swing:** 3.1 J applet, Icons and Labels, Text Fields, Buttons Combo Boxes Tabbed Panes, Scroll Panes.	05	
	Total	25 Hrs.	

Contents (Practical)	
Sl. No.	Skills to be developed
1.	Intellectual Skills: Use of programming language constructs in program implementation. To be able to apply different logics to solve given problem. To be able to write program using different implementations for the same problem Study different types of errors as syntax semantic, fatal, linker & logical Debugging of programs Understanding different steps to develop program such as Problem definition Analysis Design of logic Coding Testing Maintenance (Modifications, error corrections, making changes etc.)
2.	Motor Skills: Proper handling of Computer System.

List of Practical:

Sr. No.	Practical
1	Write a program to design a form using components textbox, text field, checkbox, buttons, list and handle various events related to each component.
2	Write a program to design a calculator using Java components and handle various events related to each component and apply proper layout to it.
3	Write a program to demonstrate use of Grid Layout.
4	Write a program to demonstrate use of Flow Layout.
5	Write a program to demonstrate use of Card Layout.
6	Write a program to demonstrate use of Border Layout.
7	Write a program to display any string using available Font and with every mouse click change the size and / style of the string. Make use of Font and Font metrics class and their methods.

8	Write a program to create a menu bar with various menu items and sub menu items. Also create a checkable menu item. On clicking a menu Item display a suitable Dialog box.
9	Write a program to increase the font size of a font displayed when the value of thumb in scrollbar increases at the same time it decreases the size of the font when the value of font decreases.
10	Write a program to retrieve hostname using methods in Inet Address class.
11	Write a program that demonstrates TCP/IP based communication between client and server.
12	Write a program that demonstrates UDP based communication between client and server.

**Any other syllabus oriented programs/projects can be done to full fill the requirements.

Text Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Horstmann, Cornell	Core Java Vol II		PEARSON
Savaliya	Advance Java Technology		Dreamtech
Debasish Jana	Java and Object Oriented Programming Paradigm		PHI
Geary / Horstmann	Core Java Server Faces, 3e		Pearson
De Jonge	Essential App Engine: Building High-Performance Java Apps with Google App Engine		Pearson
Hall	Core Servlets and Java Server Pages Volume II: Advanced Technologies 2e		Pearson
Hall	Core Servlets and JavaServer Pages: Volume I: Core Technologies, 2e		
Murach	Murach's Java Servlets and JSP		SPD
kogent	Java Server Programming Java EE6		Dreamtech
C. Darby, J. Griffin and others	Beginning Java Networking	2nd	Wrox
Mahesh P. Matha	JSP and Servlets		PHI

Reference Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Herbert Schildt	JAVA 2: The Complete Reference		Tata Mc-Graw Hill Pub. Co. Ltd
Harold	Java Network Programming		SPD

Suggested list of Laboratory Experiments:

Sl. No.	Laboratory Experiments
1.	Design employee information form and perform the validations.

2.	Program for user login using JSP.
3.	Program for client server communication.
4.	
Suggested list of Assignments / Tutorial:	
Sl. No.	Topic on which tutorial is to be conducted
1.	Assignment on AWT, event controls, layout manager, menus.
2.	Assignment on different JDBC connections in Java.
Note:	
Sl. No.	
1.	Question Paper setting tips: End Semester Examination: Question should be made as per class weight and must cover whole syllabus. Objective Type: 20 marks (answered in one or two sentences. Subjective type: 50 marks. To be set at least 8 question and to be answered 5 questions each carrying 10 marks

Format for Syllabus

Name of the Course: Computer Engineering Group (System Programming & Compiler Design)	
Course Code: CST/6/602	Semester: SIXTH
Duration:	Maximum Marks:100+50
Teaching Scheme	Examination Scheme
Theory: 3 hrs./week	Mid Semester Exam.: 20 Marks
Tutorial: 0 hrs./week	Assignment & Quiz: 10 Marks

Practical: 3 hrs./week		End Semester Exam.: 70 Marks	
Credit: 3+1		Practical 25(int) + 25(ext)	
Aim:			
Sl. No.			
1.	To study techniques for development of system related applications and services.		
2.	It is the activity of programming system software.		
3.	It aims to produce software which provides services to the user.		
Objective:			
Sl. No.	After studying the subject students will be able to		
1.	Understand various design aspect of the system software.		
2.	Develop software tools like editors and debuggers.		
3.	Develop various system software.		
Pre-Requisite:			
Sl. No.			
1.	Knowledge of programming languages.		
2.	Knowledge of system tools available in computer system.		
3.	Knowledge of assembly language program.		
Contents (Theory)		Hrs./Unit	Marks

Unit: 01	**Compliers** 1.1 Statement of a problem - Recognizing basic elements; Recognizing Syntactic units and Interpreting meaning; Intermediate from: Arithmetic statements, Non - Arithmetic statement, Non-executable statements;Storage Allocation; Code Generation: Optimization (M/C independent), Optimization(M/C dependent); Assembly Phase; GeneralModel of Compiler. 1.2 Phases of Compiler	08	
Unit: 02	**Lexical Analysis** 2.1 The role of the lexical analyzer, Tokens, Patterns, Lexemes, Input buffering, Specifications of a token, Recognition of a tokens.	05	
Unit: 03	**Syntax Analysis** 7.1 The role of a parser, Context free grammars, 7.2 Writing a grammar, Top down Parsing, 7.3 Non-recursive Predictive parsing (LL), 7.4 Bottom up parsing, Handles	05	
Unit: 04	**Intermediate code generation** 9.1 Intermediate languages, 9.2 Graphical representation, 9.3 Three-address code. **Code optimization** 9.4 Introduction, 9.5 Basic blocks & flow graphs, 9.6 Transformation of basic blocks	07	
Total		25	

Contents (Practical)	
Sl. No.	Skills to be developed
1.	Practical: Skills to be developed:

	1. Programming skills 2. Design of assemblers 3. Logical Thinking
2.	Motor Skills: Proper handling of Computer System.

List of Practical:

Sr. No.	Practical
1	Programming on sorting and searching techniques Liner search, Binary search, Interchange sort; Shell sort; Bucket sort; Radix exchange sort; Address calculation sort; Comparisons of sort; Hash or Random entry searching.
5	Design of various phases of Compiler.
**Any other syllabus oriented programs/projects can be done to full fill the requirements.	

Text Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Aho, Sethi, Ullman	Compilers principles, techniques, and tools		PEARSON
Beck	Systems Software, 3e	2nd	PEARSON
PAL	System Programming		OXFORD
John J. Donovan	System Programming		TMH
Grune	Modern Compiler Design		WILEY
DHAMDHERE	Systems Programming		Tata McGraw-Hill Edition
Muneeswaran	Compiler Design		Oxford
Chattopadhyay	Compiler Design		pHI
Shalini	System Software		Scitech
chattopadhyay	System software		pHI
Sadasivam	Compiler Design		Scitech

Reference Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
John J. Donovan	System Programming		Tata McGraw-Hill Edition2003

Suggested list of Laboratory Experiments:

Sl. No.	Laboratory Experiments
1.	Take a simple piece of code and separate the tokens from it.

Suggested list of Assignments / Tutorial:

Sl. No.	
1.	Different phases in compilations.
2.	Macro processing in details.
3.	Assignment of compiler.

Note:

Sl. No.	
1.	Question Paper setting tips: End Semester Examination: Question should be made as per class weight and must cover whole syllabus. Objective Type: 20 marks (answered in one or two sentences. Subjective type: 50 marks. To be set at least 8 question and to be answered 5 questions each carrying 10 marks

Format for Syllabus

Name of the Course: ELECTIVE II (Numerical Methods)	
Course Code: CST/6/603(I)	Semester: Sixth
Duration:	Maximum Marks: 100+50
Teaching Scheme	Examination Scheme
Theory: 3 hrs./week	Mid Semester Exam.: 20 Marks
Tutorial: hrs./week	Attendance, Assignment & Quiz: 10 Marks
Practical: 4 Hrs./week	End Semester Exam.: 70 Marks
Credit: 3 +2	Practical: 25(INT)+25(EXT)
Aim:	
Sl. No.	

1.	This subject enhances the knowledge of students about numerical side of mathematical analysis. It also intends to teach methods and means for estimating the accuracy of numerical results.
Objective: Student will be able to	
Sl. No.	
1.	Understand Error Handling
2.	Understand Numerical methods of Polynomial Interpolation
3.	Understand Numerical methods of Algebraic and Transcendental Equation.
4.	Understand Numerical Differentiation & Integration

Pre-Requisite:	
Sl. No.	
1.	Basic knowledge of Mathematics is helpful.
2.	Basic knowledge of C programming is helpful.
3.	

Contents (Theory)		Hrs. / Unit	Marks
Unit: 1 Name of the Topics: Error Handling	1.1 Approximation in Numerical Computation 1.2 Significant Figures 1.3 Absolute, Relative and Percentage Errors 1.4 Truncation and Round-off Errors 1.5 Accumulation and Propagation of Errors	04	
Unit: 2 Name of the Topics: Polynomial Interpolation	2.1 Forward, Backward and Divided Difference Table 2.2 Newton's Forward and Backward Interpolation Formula 2.3 Newton's General Interpolation Formula with the remainder term.	06	
Unit: 3 Name of the Topics: Solution of Algebraic and transcendental Equation.	3.1 Bisection Method 3.2 Newton-Raphson Method.	04	
Unit: 4 Name of the Topics: Numerical Differentiation & Integration	4.1 Trapezoidal rule 4.2 Simpson's 1/3 rule	04	
Unit: 5 Name of the Topics: Numerical Solution of a System of Linear Equation	5.1 Gauss-Elimination Method 5.2 Matrix Inversion Method 5.3 Gauss-Jacobi Method 5.4 Gauss-Siedal Method	07	
Total		25	

Practical:

Practical Content:
All of the experiment shall be performed using C or MATLAB
List of Experiments:
1 Implementation of Forward, Backward and Divided Difference Table
2 Implementation of Newton's Forward and Backward Interpolation Formula

3 Implementation of Newton's General Interpolation Formula with the remainder term
4 Implementation of Lagrange's Interpolation Formula
5 Implementation of Inverse Interpolation
6 Implementation of Bisection Method
7 Implementation of Newton-Raphson Method
8 Implementation of Differentiation of Forward and Backward Formula
9 Implementation of Trapezoidal rule
10 Implementation of Simpson's 1/3 rule
11 Implementation of Gauss-Elimination Method
12 Implementation of Matrix Inversion Method
13 Implementation of Gauss-Jacobi Method
14 Implementation of Gauss-Siedal Method
**Any other syllabus oriented
programs/projects can be done to full fill the
requirements.

Text Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Babu Ram	Numerical Methods		Pearson
Thandaraj	Computer-Oriented Numerical Methods with c language		PHI
Sujata Sinha	Numerical and Statistical Methods with Programming in C		Scitech
Bradie	A Friendly Introduction to Numerical Analysis		Pearson
J. B. Scarborough	Numerical Mathematics Analysis		Oxford
Dasgupta	Applied Mathematical Methods		Pearson
Sastry	Introductory Methods of Numerical Analysis, 5th ed. •		PHI
DEY	Numerical Methods		TMH
Jain, Iyengar& Jain	Numerical Methods (Problems & Solutions)		
Datta	Computer Oriented Numerical Methods		Vikas
Mollah, Chakrabarty	Computing Systems		JBBL
Gerald	Applied Numerical Analysis, 7e		Pearson
C. Froberg	Introduction to Numerical Analysis		Addison Wesley

Reference Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Balagurusamy	Numerical Methods		TMH
Fausett	Applied Numerical Analysis Using MATLAB, 2e		Pearson
AruMugam	Numerical Methods		Scitech

1.	Question Paper setting tips: End Semester Examination: Question should be made as per class weight and must cover whole syllabus. Objective Type: 20 marks (answered in one or two sentences. Subjective type: 50 marks. To be set at least 8 question and to be answered 5 questions each carrying 10 marks.

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Format for Syllabus

Name of the Course:Computer Engineering Group (Advanced Web Technology (ELECTIVE - II))		
Course Code: CST/6/603(II)		Semester: SIXTH
Duration:		Maximum Marks: 100 + 50
Teaching Scheme		Examination Scheme
Theory: 3 hrs./week		Class Test: 20 Marks
Tutorial: hrs./week		Teachers Assessment: 10 Marks
Practical: 4 hrs./week		End Semester Exam.: 70 Marks
Credit: 3+2		Practical 25(int) + 25(ext)
Aim:		
Sl. No.		
1.	To Study the techniques to develop web communication services.	
2.	It provides information about web technologies that relate to the interface between web servers and their clients	
3.	Web technologies are used to support the world wide web and more are being developed all the time.	
Objective:		
Sl. No.	Students will able to:	
1.	Use GUI tools of. Net framework	

2.	Use basic and advance. Net controls.
3.	Interface back-end and front-end.
4.	Build applications integrated with .Net Framework.
5.	Build net based applications.
6.	Transfer code form VB to VB.net.
7.	Can do Asp Transaction.

Pre-Requisite:	
Sl. No.	
1.	Basic knowledge of web technology- web1.0, web2.0, semantic web.
2.	Knowledge of client-server system, java-script, php, etc.
3.	Knowledge of HTML, CSS, XML, ASP, JSP, etc.

Contents (Theory)		Hrs./Unit	Marks
Unit:1	**Introduction:** 1.1 Why dot Net - Introduction to Microsoft .Net Framework. - Building blocks in .Net - Drawback of previous languages. - Understand what is .Net 1.2 VB.Net - VB.Net overview. - Difference between VB and VB.Net 1.3 Introduction to .Net - Types of application architecture. - .Net initiative. - .Net framework: components of .Net framework, Advantages, requirement of .Net.	08	
Unit: 2	**Introduction and implementation** 2.1 Introduction to VB.Net - Features. - VB.Net IDE. - Data Types, Loops, Control structures, Cases, Operators. - Creating forms. - Procedures and functions. - Form controls. 2.2 Implementation of OOP - Creation of class and objects. - Inheritance. - Constructors. - Exception handling. 2.3 Component based programming - Working with Private assembly, shared assembly. - Using COM components developed in VB or other language.	06	
Unit: 3	**Introduction to ADO.Net and data manipulation**	06	

	3.1 Introduction to ADO.Net - What is database? - Writing XML file. - ADO.Net architecture. - Creating connection. - Dataset and Data reader. - Types of Data adapter and ADO controls. - Reading data into dataset and data adapter. - Binding data to controls. - Data table and Data row. 3.2 Accessing and manipulating data - Selecting data. - Insertion, deletion, updating, sorting. - How to fill dataset with multiple tables. 3.3 Multi-threading - Working with multithreading. - Synchronization of Threads. 3.4 Migrating from VB 6.0 to VB.Net - Updating the applications developed in VB to VB.net		
Unit: 4	**Introduction to ASP.Net** - Difference between ASP and ASP.Net - Introduction to IIS. - What is web application? Why it is used? - ASP.Net IDE. - Creation of web forms. - Using web form controls.	05	

Total	25	

Contents (Practical)

Sl. No.	Skills to be developed
1.	Practical: Skills to be developed: Intellectual skills: Use of programming language constructs in program implementation. To be able to apply different logics to solve given problem. To be able to write program using different implementations for the same problem Study different types of errors as syntax semantic, fatal, linker & logical Debugging of programs Understanding different steps to develop program such as Problem definition Analysis Design of logic Coding Testing Maintenance (Modifications, error corrections, making changes etc.)
2.	Motor Skills: Proper handling of Computer System.

List of Practicals:

1. Introduction to .Net framework.
2. a) Design Login form with validation.

b) Design Registration form with validation of email address, date of birth,
blank field, telephones and mobile numbers etc.
3. Design form, make it a class, create its object and access it from another form.
4. Design student class, marks class, inherits it in result class and access it using form.
5. Create instance of class using new operator of above example.
6. Design mark sheet of student using XML file and dataset.
7. Design employee details with help of database (back-end) using data adapter,
data reader and datasets. Use data grid to display result.
8. Generation of database (data table) of employee or student with help of data tables of .Net.
9. To use multiple table design example of employee and department.
10. Design registration form of college using text box, text area, radio list, check list,
button etc. using Auto post back property.

Mini Project :

Design the mini project by integrating all the experiment performed as mentioned in the curriculum.

**Any other syllabus oriented programs/projects can be done to full fill the requirements.

Text Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Esposito	Programming Microsoft ASP.Net		WILEY
Chavan	Visual BasiC. NET	2nd	PEARSON
Spaanjaars	ASP.NET 4.5 in C# and VB		Wiley India
Anita &Bradely	Prog. In VB.Net		TATA Mc Grow Hill
Esposito	Professional ASP.Net 4 in C# and VB		WILEY
Newsome	Beginning Visual Basic 2012		Wiley India
Boehm	Murach's ASP.NET 4 Web Programming with VB 2010		SPD
RadhaGanesan	VB.Net		Scitech

Reference Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Ivan Bayross	Teach Yourself Web		BPB Publications

	Technologies - Part I		
Deitel	XML: How to Program		Pearson

Suggested list of Laboratory Experiments:	
Sl. No.	Laboratory Experiments
1.	Design the customer information form and perform the different validations.
2.	Write a program to access values from the previous form.
3.	Write a code in asp.net to perform the login validation.

Suggested list of Assignments / Tutorial:	
Sl. No.	Topic on which tutorial is to be conducted
1.	The details of asp.net, vb.net and ADO.net.
2.	Assignment on ASP.net objects and components.
3.	Assignment on web technologies in vb.net.

Note:	
Sl. No.	
1.	Question Paper setting tips: End Semester Examination: Question should be made as per class weight and must cover whole syllabus. Objective Type: 20 marks (answered in one or two sentences. Subjective type: 50 marks. To be set at least 8 question and to be answered 5 questions each carrying 10 marks

Format for Syllabus

Name of the Course: ELECTIVE II (Digital Image Processing)	
Course Code: CST/6/603(III)	Semester: Sixth
Duration:	Maximum Marks: 100 +50
Teaching Scheme	Examination Scheme
Theory: 3 hrs./week	Mid Semester Exam.: 20 Marks
Tutorial: hrs./week	Attendance, Assignment & Quiz: 10 Marks
Practical: 4 Hrs./week	End Semester Exam.: 70 Marks
Credit: 3 +2	Practical: 25(INT)+25(EXT)

Aim:	
Sl. No.	
1.	Student should able to do various image processing task

Objective: Student will be able to	
Sl. No.	
1.	Understanding of digital image fundamentals.
2.	Understanding of image digitization.
3.	Understanding of image display hardware and software.
4.	Ability to understand and apply image enhancement and restoration techniques.
5.	Understanding of image encoding techniques.
6.	Ability to apply compression techniques.

Pre-Requisite:	
Sl. No.	
1.	Basic knowledge of Digital Image is helpful.

2.	Basic knowledge of Color and graphics is helpful.		
3.			
Contents (Theory)		Hrs./Unit	Marks
Unit: 1 Name of the Topics: Basics of Image Processing	1.1 Overview & Nature of Image Processing 1.2 Digital Image Representation & types of Images 1.3 Steps in Image Processing. 1.4 Image Processing Applications 1.5 Components of Image Processing system.	04	
Unit: 2 Name of the Topics: Digital Image Fundamentals	2.1 Elements of Visual Perception 2.2 Image Sensing and Acquisition 2.3 Image Sampling and Quantization. 2.4 Basic Relationships Between Pixels 2.5 Linear and non-linear operations.	03	
Unit: 3 Name of the Topics: Image Enhancement in the Spatial Domain	3.1 Some Basic Gray Level Transformations, 3.2 Histogram Processing in details, 3.3 Enhancement UsingArithmetic/Logic Operations, 3.4 Basics of Spatial Filtering, 3.5 Smoothing Spatial Filters, 3.6 Sharpening Spatial Filters, 3.7 Combining Spatial Enhancement Methods	08	
Unit: 4 Name of the Topics: Image Restoration.	4.1 A Model of the Image degradation/Restorationprocess, 4.2 Noise Modelling, 4.3 Image Restoration in thePresence of Noise Only–Spatial Filtering, • Arithmetic mean filter • Geometric mean filter • Median filter	10	
	Total	25 Hrs.	

Total	25

Practical:

Practical Content:
All of the experiment shall be performed using MATLAB
List of Experiments:

1. Image resizing, Image type conversion.
2. Extraction of color band, Creation of a synthetic image.
3. Image addition and Image complement.
4. Image geometric operations
5. Histogram operations, contrast stretching and gamma correction.
6. Color image operation – color model transformation, contrast stretching, histogram manipulation etc.

*** Any type of Image processing task can be done. Some task may be performed using in MATLAB(I,e. by programming).

Text Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Gonzalez	Digital Image Processing		Pearson
Sridhar	Digital Image Processing		Oxford
Jayraman	Digital Image Processing		TMH
Joshi	Digital Image Processing—An Algorithmic Approach •		PHI
Chanda&Majumdar	Digital Image Processing and Analysis, 2nd ed. •		PHI
Castleman	Digital Image Processing		Pearson
Annadurai	Fundamentals of Digital Image Processing		Pearson
Sudhir, Patil	Digital Image Processing		Vikas
Dey and Ray	MatLab Programming for Engg and Science		SPD

Reference Books:

Name of Authors	Title of the Book	Edition	Name of the Publisher
Gopi	Digital Image Processing using Matlab		Scitech
Gonzalez	Digital Image Processing using Matlab		TMH

Note:

Sl. No.	
1.	Question Paper setting tips: End Semester Examination: Question should be made as per class weight and must cover whole syllabus. Objective Type: 20 marks (answered in one or two sentences. Subjective type: 50 marks. To be set at least 8 question and to be answered 5 questions each carrying 10 marks

Format for Syllabus

Name of the Course:Professional Practice-IV(Seminar Work)	
Course Code: CST/6/PP-IV	Semester: Sixth
Duration: 3 hrs/week For preparing their presentation.	Maximum Marks: 50 (Internal marks to be given at end of Sixth semester)
Credit: 3	
	Examination Scheme:
1.	Seminar on Project Work is intended to provide opportunity for students to present the Project Work/Modern development in Computer Science, in front of a technical gathering (Student / Teacher and others) with the help of different oral, audio and visual communication aids which they learnt through different courses in the diploma course. In the Seminar, students are not only expected to present their Project Work, but also to defend the same while answering questions arising out of their presentation.

Format for Syllabus

Name of the Course: General Viva - Voce	
Course Code: CST/6/GVV	Semester: Sixth
Duration:	Maximum Marks: 100 (to be given at end of Sixth semester) 50(int) + 50(ext)
Credit: 3	
	Examination Scheme:
1.	The Final Viva-Voce Examination shall take place at the end of the Part – III Second Semester. It is to be taken by one External and one Internal Examiner. The External Examiner is to be from industry / engineering college / university / government organisation and he / she should give credit out of 50 marks; whereas, the Internal Examiner should normally be the Head of the Department and he / she should give credit of 50 marks. In the absence of the Head of the

	Department, any other lecturer will act as the Internal Examiner.
3.	
4.	
5.	