Course Code : DElnE

Semester : Mathematics - I Subject Code : 133MA11a

# **Teaching & Examination Scheme**

	'eac che	hing me	Paper Hours					Exan	nination	Schem	ie				Total Marks
L	T	P		The	eory	Test	Tot	Total		P		0	TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	2	-	3	80	32	20	100	40	-	-	-	-	25	10	125

### Rationale: -

Mathematics is the foundation stone for studies in all branches of Engineering. This subject helps students to develop logical thinking which in turn is useful in understanding the principles of all other subjects. Analytical and systematic approach towards any problem is developed by learning mathematics.

# **Objective: -**

- 1. To teach students basic facts, concepts and principles of mathematics as a tool to analyze engineering problems.
- 2. To make students well versed in the prerequisites for further studies in mathematics and engineering.

Sr.No	Contents	L	M
	Section- I		
1	Binomial Theorem	08	10
	1.1 Concepts of Permutations and Combinations and		
	problems based on ${}^{n}P_{r}$ , ${}^{n}C_{r}$		
	1.2 Binomial Theorem with positive integral index,		
	general term, Binomial expansion for negative		
	integral and fractional index		
2	Matrices	08	12
	2.1 Matrices of order m x n, types of matrices, equality of matrices,		
	2.2 Addition and subtraction of matrices, multiplication of matrices.		
	2.3 Transpose of matrix, adjoint of matrix, inverse of matrix,		
	2.4 Solution of simultaneous linear equations by adjoint method.		
3	Straight lines	05	08
	3.1 Equations of straight lines in different forms.		
	3.2 Angle between two straight lines, conditions for		
	two parallel and perpendicular straight lines.		

4	<ul> <li>Complex Numbers</li> <li>4.1 Definition of complex number, Elementary operations.</li> <li>4.2 Argand's Diagram, Modulus, Amplitude, Polar form of a complex number.</li> </ul> Section-II	05	10
	Section-11		
5	<ul> <li>Trigonometry</li> <li>5.1 Circular measure of an angle, Conversion from degrees to radians and radians to degrees.</li> <li>5.2 Trigonometric ratios of angle in four quadrants.</li> <li>5.3 Compound angle formulae.</li> <li>5.4 Allied angle formulae.</li> <li>5.5 Product formulae, Sum or difference formulae.</li> <li>5.6 Multiple, submultiples angle formulae.</li> <li>5.7 Inverse trigonometric functions.</li> <li>5.8 Properties of triangle: sine rule, cosine rule. (without proof)</li> </ul>	16	28
6	Determinants 6.1 Determinant of order three. 6.2 Cramer's rule. 6.3 Properties of determinants.	06	12
	Total	48	80

# **REFERENCE BOOKS:**

- 1) Basic Mathematics B.M.Patel, J.M.Rawal and others Nirali Prakashan.
- 2) Mathematics for Polytechnic S. P. Deshpande- Pune Vidyarthi Griha Prakashan.

Course Code : DElnE Semester : First Subject Title : Chemistry Subject Code : 133CH12

## Teaching and Examination Scheme:-

	achi hem	_	Paper Hours				F	Examir	nation S	Schem	e				Total Marks
L	T	P		The	ory	Test	To	Total		P		)	TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	-	2	3	80	32	20	100	40	25	10	-	-	25	10	150

#### Rationale:-

Chemistry is a basic science subject which is essential to all engineering courses. It gives knowledge of engineering materials, their properties, related applications & selection of materials for engineering applications. The contents of this curriculum provide knowledge of cells and batteries, selection of appropriate materials for engineering applications and methods of protection by metallic and non-metallic coatings. This subject will generate curiosity of carrying out further development in engineering fields.

# **Objectives:-**

- 1. To understand mole concept and volumetric analysis.
- 2. To represent the formation of bonds in molecules.
- 3. Generalize different factors which affect atmospheric as well as electrochemical Corrosion.
- 4. Know various insulating or dielectric materials used for electronic equipments and computers.
- 5. To identify the properties of metal, alloys and other chemical compounds related to engineering applications.

## **Syllabus**

# Part – I: Theory

		SECTION - I		
No.	Chapter	Contents	L	M
1	<b>Atomic Structure</b>	Definitions of Elements, atoms, Molecules, Definition	06	12
	and Chemical	of atomic number, atomic mass number, Isotopes and		
	Bonding	Isobars, Electronic configuration of elements,		
		Definitions: atomic weight, equivalent weights of an		
		element, Molecular weight, Mole in terms of number,		
		mass, volume, Determination of percentage		
		composition of an element in a given molecule,		
		Chemical bond, octet rule, formation of various types		
		of chemical bonds: Covalent, Ionic, Coordinate		

		covalent bonds along with examples CH <sub>4</sub> , H <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> , NaCl, MgCl <sub>2</sub> , H <sub>3</sub> O <sup>+</sup> , NH <sub>4</sub> <sup>+</sup> , BF <sub>3</sub> -NH <sub>3</sub>		
2	Ionic Equilibrium:	Definitions & theories of acids & bases:Classical	08	10
		theory, Arrhenius theory, Lowry-Bronsted		
		theory, Lewis theory, pH, pOH, pH scale, Numericals,		
		Basicity of an acid and acidity of a base, Numericals of		
		Equivalent weight of acids, bases, Definition of salts &		
		types of salts: Normal, Acidic, Basic, Mixed, Double salts, complex salts, Electrolytes, Types of		
		Electrolytes, Degree of dissociation, Conductivity of		
		Electrolytes – Concept of Ohms Law, Specific		
		Conductivity, Specific Resistance, Equivalent		
		Conductivity & Molar		
		Conductivity, Variation of Specific & Equivalent		
		Conductance with		
		dilution, Definition of Cell Constant		
3	Solution	Solution, Concentrations of solution: Grams per litre,	06	10
		Percentage by weight or volume, Normality, Morality,		
		Molality. Volumetric analysis, Titrations, Acid base		
		titration, Acidimetry, Akalimetry, Redox titration,		
		Iodometric titrations, Complexometric titration,		
4	D. J D	Precipitation titration.	02	00
4	Redox Reactions	Introduction, Oxidation, Reduction, Electron transfer	02	08
		concept, Oxidising & reducing agents.  SECTION - II		<u> </u>
5	Metals and Alloys	Metals:	05	08
		Definition of Metallurgy, Important Ores of Copper,		
		Metallurgy of Copper, Physical & Chemical Properties		
		(Action of Air, Water & Acids), Uses of Copper,		
		Important Ores of Aluminium, Extraction of		
		Aluminium from Alumina by Electrolytic Reduction		
		Process, Electrolytic Refining of Aluminium,		
		Engineering Properties of Aluminium & Uses		
		Alloys		
		Definition, Compositions, Properties & Applications of		
		Soft Solder, Tinmann's Solder, Brazing Alloy,		
-	Flootmooh and attent	Plumber's Solder, Rose Metal.	07	12
6	Electrochemistry	Electrochemistry, Electrochemical reactions, Construction and working of electrochemical cell &	07	12
		electrolytic cell, Faradays I & II laws of electrolysis,		
		Applications of electrolysis: electroplating & refining,		
		Electrochemical cells and batteries, Construction,		
		working and applications of dry cells, Lead acid		
		storage batteries, Lithium Ion Polymrr cells, fuel cells		
7	Corrosion	Introduction, Types of corrosion Atmospheric	07	10
		corrosion, oxide films, factors affecting Atmospheric		

8	Lubricants and Insulators	corrosion, electrochemical corrosion, mechanism of electrochemical corrosion, galvanic corrosion, protective measures against corrosion: electrochemical protection by sacrificial anodic protection and impressed current, cathodic protection coatings (galvanic and zinc, organic coating agents, Electroplating, metal cladding,).  Lubricant, Functions of lubricant, Types of lubricants with examples, Ideal lubricant and properties: Viscosity, Viscosity index, fire point, flash point, pour point, cloud point, Saponification value, Acid value  Insulators  Definition of Dielectrics and Insulators, Classifications of Insulating Materials, Properties & Applications of Inert Gases, Silicone Fluids, Mineral Oil or Transformer Oil, Teflon, Epoxy Resin, Ceramics,	07	10
		Transformer Oil, Teflon, Epoxy Resin, Ceramics, Glass, Mica, Mylar.	48	80

# **Part II:- Practicals**

# List of experiments:-

- 1. To study the use of indicators, for identification of acid, base and neutral solutions from the given set of solutions.
- 2. To standardize HCl solution using N/10 Na<sub>2</sub>CO<sub>3</sub>.
- 3. To standardize KMnO<sub>4</sub> solution using N/10 C<sub>2</sub>H<sub>2</sub>O<sub>4</sub> solution.
- 4. To determine strength of the mixture of  $H_2SO_4 + C_2H_2O_4$  using NaOH and KMnO<sub>4</sub> solution.
- 5. To determine the amount of ferrous sulphate or ferrous ammonium sulphates in the given solution using KMnO<sub>4</sub> solution.
- 6. To standardize K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> solution using N/10 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> solution.
- 7. To determine the amount of ferrous sulphate or ferrous ammonium sulphates in the given solution using K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> solution.
- 8. To determine the amount of copper sulphate in the given solution using  $Na_2S_2O_3$  solution.
- 9. To standardize EDTA solution using N/10 ZnSO<sub>4</sub> solution.
- 10. To standardize AgNO<sub>3</sub> solution using NaCl solution.

## **Learning Resources:**

#### **Text Books**

1. Essentials of Physical chemistry B. S. Bhal & G. D. Tuli, Edition: 18<sup>Th</sup> (2010) S Chand Group, New Delhi.

2. Engineering Chemistry Jain & Jain Dhanpat Rai & Co. (Pvt.) Delhi – 110006 Ltd Edition: Fifteenth (2008)

# **Reference books**

A Text Book of Chemistry Shashi Chawla Educational & Technical Publishers Dhanpat Rai & Co. (Pvt.) Ltd, Edition: Third (2005)

Course Code : DElnE Semester : First

**Subject Title : Communication Skills- I** 

Subject Code : 133HM13x

### **Teaching & Examination Scheme**

Teaching Paper Scheme Hours Examination Sci						Schem	e				Total Marks				
L	T	P		Theory		Test	Total		F		(	)	T	W	
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	2	-	3	80	32	20	100	40	-	-	-	-	25	10	125

#### **Rationale:**

Technicians in industry require in grammatically correct written and oral communication. In order to develop the abilities in students a text has been introduced. The tutorials have been incorporated to provide practice to the students to develop writing skills. Further exercises have been included for improving oral communication, apart from the basic grammar topics.

## **Objectives:**

Developing the skills of comprehension of passages, building vocabulary and ability to express through oral and written communication, improving skills of composition, and help them formulate grammatically correct sentences.

## LEARNING STRUCTURE

### **Application:**

To enable students to comprehend the meaning of new words, use grammar to write correct answer to the questions and develop paragraphs

#### **Procedure:**

- 1. Technique of providing responses to short and long questions
- 2. Technique of application of grammar
- 3. Procedure for writing paragraphs
- 4. Technique of referring to dictionary and thesaurus

## **Principles:**

- 1. Principles of formation of sentences
- 2. Principles of identification of various aspects of grammar
- 3. Principles to develop the theme of paragraph

### **Concepts:**

- 1. Concept of comprehending the text
- 2. Concept of Time
- 3. Concept of classifying types of paragraphs

# **Facts:**

- 1. Content of the text
- 2. Part of speech: Tenses, Verbs etc.
- 3. Topic sentences

# **COURSE COTENTS: Theory**

PART I: TEXT Section I	Hours	Marks
Communication Skills-I	24	40
*Vocabulary-Understanding meaning of contextual words	24	40
* Comprehension- Understanding the passage, discussing the theme		
and expressing it appropriately		
* Identifying parts of speech to improve day to day oral		
communication		
Communication		
Section II		
PART II: Application of Grammar		
* Verbs: Subject –verb- agreement		
* Using appropriate Tenses according to the suitability and time		15
elements		
Punctuation		
Correction of commonly misspelled words		
Identifying Common errors in English language		
PART III: Paragraph Writing/ Short composition	-	
* How to write a paragraph /short composition (Exercises given in		15
assignment 4)		
	24	
PART IV: Vocabulary Building	]	
* Word Formation		
*Technical vocabulary (usage of appropriate technical words in a		10
passage)		
* use of synonyms/ antonyms/ homonyms /homophones		
* One word substitute		
Total	48	80

Term work will consist of 9 assignments.

# Skills to be developed:

# **Intellectual Skills:**

1. Skills of Speaking in correct English

- 2. Exploring details and its application.
- 3. Reporting Skills and expressing effectively

#### **Motor Skills:**

- 1. Use of appropriate body language
- 2. Diction and Enunciation

## **Listening Skills:**

1. Skills of listening and Comprehension

# **List of Assignments:**

- 1. <u>Building Vocabulary</u> (12 hrs 2 assignments)
  - i) 25 words for each assignment.
  - ii) Technical vocabulary- (2 hrs-1 assignment)
- 2.  $\underline{Grammar}$  (8 hrs 2 assignments)
  - i) Insert correct parts of speech in the sentences .(16 sentences two each, from different part of speech)
  - ii) Punctuate the sentences .(10 sentences)
  - iii) Usage of appropriate spellings
- iv) Correction of tenses in the passages written by students.
- 3. <u>Errors in English</u> (4 hrs- 2 assignments)
  - i) Find out the errors and rewrite the sentences given by the teacher. (20 sentences)
- 4. Write paragraphs/ short composition on given topics (4 hrs)
  - i) Engineers Nation Builders
  - ii) An unforgettable incident
  - iii) Narrate your long term goal in life.
  - iv) Biography of a person who inspired you.

## **Learning Resources:**

**Text Book:** Communication Skills I-

Compiled by Mrs. Thomas & Mrs. Krishnamurthy, H&M Dept

### **Reference Books:**

- 1. Contemporary English grammar, structure and composition, Green David, Macmillan, India, First edition, 2000.
- 2. English grammar and composition, R. C. Jain, Macmillan, India, First edition, 2005.
- 3. Thesaurus, Rodgers, Oriental Longman
- 4. Dictionary, Oxford, Oxford University
- 5. Dictionary, Longman, Oriental Longman
- 6. English for Practical purposes, Patil Z. N. et al, Macmillan, India, 2004
- 7. English at Workplace, Sanyal Mukti, Macmillan, India

Course Code : DElnE Semester : First

**Subject Title:** Elements of Electrical & Electronics Engineering

Subject Code: 133EX14

# Teaching and Examination Scheme:-

Teaching Scheme Paper Hours Examination Scheme											Total Marks				
_	т	п		The	Theory         Test         Total         P         O         TW           Max         Min         Max         Min         Max         Min         Max         Min         Max         Min										
L	1	P		Max											
3	-	2	3	80	32	20	100	40	-	-	25	10	25	10	150

### Rationale:-

Components play an important role in technology. This subject gives knowledge of the basic components, their construction characteristics, tolerance and application in Engineering field.

# **Objectives:-**

Students should be able to:

- 1) Recognize the component and type of component.
- 2) Recognize the material used for the type of component.
- 3) Understand the construction and the working principle of the component.
- 4) Understand the specifications (ratings) of the component.
- 5) Test the component.

# **Syllabus**

## **Part I:- Theory**

Sr. No	Contents	L	M
	Section I		
1	<b>RESISTORS</b> : Basic concepts. Ohm's Law. Fixed and Variable type.	10	18
	<b>Fixed</b> : Carbon composition, carbon film, metal film,		
	Ceramic & Vitreous Enamel wire-wound types.		
	Variable : Rheostat, Carbon track and wire-wound potentiometers		
	(Linear & Non-Linear), Preset resistors.		
	Their construction, power rating, tolerance (accuracy)		
	temperature coefficient, and typical applications.		
	E6, E12 & E24 series of resistors.		
	Colour Code of Standard Resistors.		
	Series and parallel combinations of resistor(Numericals without derivation)		
	Concept of Electric current, potential and potential difference		

	Conductivity and conductance		
	Current division rule for parallel and voltage division rule for series circuit		
2	<b>CAPACITORS</b> : Definition and principle	7	11
	Fixed and Variable type.		
	Fixed : Ceramic, Mica, Polyester and Electrolytic		
	Variable : Air Gang and Trimmer.		
	Their construction, voltage rating & typical applications.		
	Colour Coding of capacitors.		
	Series and parallel combination of capacitor		
3	<b>INDUCTORS:</b> Definition and principle	7	11
	Construction & application of air core, iron core, ferrite core,		
	inductor coils(winding) used in Motors, Generators,		
	Transformers, Tube-light chokes, D.C. power supply		
	Filter chokes, loudspeakers and ignition system of vehicles.		
	Series and parallel combination of inductor		
	Section II		
4	<b>SWITCHES:</b> Types: Slide, Toggle, Push to ON, Push to OFF, Rocker,	5	10
	Rotary & Reed switches. Their construction & applications.		
5	SEMICONDUCTOR & OPTOELECTRONIC DEVICES:	16	26
	PN JUNCTION DIODES :Germanium and Silicon.		
	Introduction to intrinsic and extrinsic semiconductor		
	LIGHT DEPENDENT RESISTOR. (LDR)		
	<b>LED's:</b> Light Emitting Diodes – Red, Green, Yellow,		
	Blue and Bicolor type.		
	<b>DISPLAYS:</b> Seven Segment LED Display,		
	5 x 7 Dot Matrix LED Display,		
	Liquid Crystal Display ( LCD ).		
	Their construction, operation and applications.		
6	i) Breadboard, Printed Circuit Board ( PCB ):	3	04
	Types and applications.		
	ii) Soldering iron, solder wire and soldering techniques.		
	TOTAL	48	80

# Part II :- Practicals

List of Laboratory Experiments:-

- 1. To identify the value, tolerance of resistors and capacitors by colour code.
- 2. To measure the value of resistor/s using multimeter.
- 3. To test rheostat, linear potentiometer, logarithmic potentiometer, preset variable resistors.
- 4. Testing of LDR on multimeter.

- 5. Testing of Germanium, Silicon PN diodes on multimeter.
- 6. Use of breadboard & testing of different colour LED's, 7 segment LED Display on breadboard.
- 7. Testing of switches by measuring their contact resistance on multimeter.

**NOTE**: The students should bring Digital Multi Meter (DMM), soldering iron, wire strippers (Cutters), & blade with them in the laboratory.

# **Learning Resources:-**

**Text Book:** - Electronic Circuits Handbook, 3<sup>rd</sup> Edition by Michael H Tooley. (BPB Publications).

### **Reference Books:-**

- 1. Basic Electronics and Linear Circuits, 4<sup>th</sup> Edition by N N Bhargava, D C Kulshreshtha & S C Gupta. (Tata McGraw Hill Publishing Company Limited)
- 2. Electronic Components & Materials, 2<sup>nd</sup> Edition by S M Dhir, (Tata McGraw Hill Publishing Company Limited).
- 3. Electronic Components and Materials, 2<sup>nd</sup> Edition by Grover & Jamwal, Dhanpat Rai & Sons.

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Course Code : DElnE Semester : First

**Subject Title:** Electrical & Electronics Workshop Practice

Subject Code: 133EX15

# Teaching and Examination Scheme:-

	eachi chen	0	Paper Hours		Examination Scheme											
т	т	D		The	eory	Test	Total		P		0		TW			
L							Max	Min	Max	Min	Max	Min	Max	Min		
1	-	3	-	-	-	-	-	-	-	-	-	-	50	20	50	

### Rationale:-

This subject will help the students in knowing the general working and faults occurring in the various common appliances.

# **Objectives:-**

The student must be able to:

- 1) Identify the various parts of common household gadgets.
- 2) Explain the principle of operation of these gadgets.
- 3) Troubleshoot common faults that can occur in these gadgets.

# **Learning Structure:**

# **Syllabus**

Part 1:- Theory

Sr. No	Contents	L
1	Concepts of Electrical Wiring:	4
	a) House wiring	
	b) Staircase wiring	
	c) Office wiring	
	d) Industrial wiring	
2	Principle of operation:	8
	a) Ceiling Fan	
	b) Table Fan	
	c) Tube Light	
	d) Mixer/Grinder	
	e) Induction Heater	
	f) Immersion Heater/Geyser	
	g) Power Supply Eliminator	
	h) Electronic Fan Regulator/Light Dimmer	

3	<ul><li>a) Wiring and testing of AC 230V, single phase 50 Hz mains domestic supply board.</li><li>b) Troubleshooting of faults occurring in the above gadget connections.</li></ul>	4
	Total	16

## **List of Laboratory Experiments:**

- 1. Testing of ac mains connection using Tester & Test Lamp.
- 2. Domestic wiring practice of ceiling fan
- 3. Domestic wiring practice of table fan
- 4. Domestic wiring practice of tube light
- 5. Domestic wiring practice of water heater (Geyser).
- 6. Study of domestic electrical fan starter.
- 7. Study of domestic electronic fan speed regulator (Dimmer).
- 8. Wiring and testing of AC 230V, single phase 50 Hz mains domestic supply board. (With 3 on/off switches, 1 three pin plug, Two regulators)
- 9. Study & fabrication of general purpose dc power supply (Battery Eliminator).
- 10. (DC voltage 6 V to 15 V, 500 mA rating).
- 11. Study of mobile charger.
- 12. Study & fabrication of 1.2 V Nickel Metal Hydride (Ni-MH) battery charger.
- 13. Wiring and soldering of one circuit on a general purpose PCB.
- 14. Wiring and testing of AC 230V, 50 Hz extension supply board.

### **Reference Books:**

- 1) Electrical wiring, Estimation and Costing, 6<sup>th</sup> Edition by S.L.Uppal (Khanna Publisher).
- 2) Power Supplies for all occasions 1<sup>st</sup> Edition by M C Sharma (BPB Publications).
- 3) Electrical Domestic Appliances, by Prof. D.U. Tatpuje
- 4) Study of Electrical Appliances, by K.B. Bhatia
- 5) How to repair Small Appliances Part I & II, by Jack Darr
- 6) Major Appliances Servicing, by P.T. Brockwell. Jr.

Course Code : DElnE Semester : First

**Subject Title** : Engineering Graphics

Subject Code : 133ME16

	achii Schei	_	Paper Hours		Examination Scheme										
L	T	P		The	eory	Test	Total		P		O		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
1	-	3	-	-	-	-	-	-	50	20	-	-	50	20	100

## Rationale:-

This subject aims at making the students understand the fundamentals of Engineering Graphics which is a language used by Engineers for developing & expressing ideas & conveying the instructions which will be used to carry out jobs in the field of engineering.

The subject deals with drawing instruments & it's use, Sectional orthographic projections and isometric views. An introduction to computer drafting will be helpful in understanding the application of the subject in the industry. This subject will play very important role in designing, operation and maintenance areas of the existing and changing technological requirements of the modern world.

# **Objectives:**

The student will able to

- Understand the fundamentals of Engineering Graphics
- Read and interpret object drawings.

# **Syllabus**

No	Topic		Contents	Hrs
1	Drawing	1.1	Letters & Numbers (Single stroke Vertical)	3
	Instruments &			
	their uses	1.2	Convention of Lines & it's applications	
2	Orthographic		2.1 Planes of projections – HP, VP & PP	8
	Projections		Orthographic projections of points.	
			2.2 Sectional Orthographic Projections of simple	
			machine parts.(Full Section in one view)	
3	Pictorial Views-		Isometric Projections and Isometric Views.	4
			(No problems with slots on inclined surfaces)	
4	Demonstration		Demonstration of drafting software to the	1
			students.	
			Total	16

#### **Practicals**

The students should workout the problems on the following topics preferably on quarter imperial drawing sheets during the practicals.

- 1. Eight Sheets on the topic of Orthographic Projections.
- 2. Two sheets on Isometric Projections.

### **Text Books:-**

- 1. Engineering Drawing: N.D.Bhat, Charotar Publishers, 49th Edition 2010
- 2. Engineering Graphics & Engineering S.T.Ghan, M.V.Rawalani- Nirali Publications-seventh Edition -2009

## References:-

- 1. Engineering Drawing- D.A.Jolhe TATA McGraw Hill- 2008
- 2. Engineering Graphics- K.R.Mohan Dhanpatrai publishing co.-I<sup>st</sup> edition-2009

Course Code : DElnE Semester : First

**Subject Title : Computer Applications** 

Subject Code : 133EX17

	Teaching Scheme Paper Examination Scheme									Total Marks					
L	T	P		The	eory	Test	To	Total		P		)	TW		
				Max	Min		Max	Max Min		Min	Max	Min	Max	Min	
-	-	2	-	-	-	-	-	-	-	-	-	-	50	20	50

#### Rationale:

Computer plays very important role in human lives. Computers are now affecting every sphere of human activity and bringing about many changes in industry, education, medicine, scientific research, law, social sciences and even in arts like music and painting.

# **Objective:**

At the end of this course students will be able to

- 1. Understand the Components of computer system.
- 2. Understand the operating system (windows 7/XP).
- 3. Understand File Storage.
- 4. Use of Microsoft office.

# **Practicals**

**Term Work-** Students should submit practical journal along with the print outs of assignments conducted during the practical.

## List of practical's

- 1. Working with Windows 2000 desktop, start icon, taskbar, Recycle Bin, My Computer icon, The Recycle Bin and deleted files. Creating shortcuts on the desktop
- 2. The Windows 2000 accessories

WordPad - editing an existing document

Use of Paint – drawing tools

The Calculator, Clock

**3.** The Windows Explorer window, concept of drives, folders and files?

Folder selection techniques, Switching drives, Folder creation

Moving or copying files, Renaming, Deleting files, and folders

**4.** Printing

Installing a printer driver

Setting up a printer

Default and installed printers

Controlling print queues

Viewing installed fonts

The clipboard and 'drag and drop'

Basic clipboard concepts

Linking vs. embedding

# Working with Microsoft word

- 5. Moving through a Word document menu bar and drop down menus toolbars
- 6. Entering text into a Word 2007 document, selection techniques Deleting text
- **7.** Font formatting keyboard shortcuts
- **8.** Paragraph formatting

Bullets and numbering

- **9.** Page formatting what is page formatting? Page margins Page size and orientation Page breaks, Headers and footers
- 10. Introducing tables and columns
- 11. Printing within Word 2007 Print setup Printing options Print preview
- **12.** Development of application using mail merge
- **13.** Mail merging addresses for envelopes
- 14. Printing an addressed envelope and letter
- 15. Creating and using macros in a document

## Preparing worksheet with Excel.

**16.** Creating and opening workbooks

Entering data

17. Navigating in the worksheet

Selecting items within Excel 2000

Inserting and deleting cells, rows and column

Moving between worksheets, saving worksheet, workbook

Formatting and customizing data

Formulas, functions and named ranges

# Creating, manipulating & changing the chart type

## **Preparing presentations with Microsoft Power Point.**

- 18. Slides and presentations, Opening an existing presentation, Saving a presentation
- 19. Using the AutoContent wizard ,Starting the AutoContent wizard
- 20. Selecting a presentation type within the AutoContent wizard
- **21.** Presentation type
- 22. Presentation titles, footers and slide number
- **23.** Creating a simple text slide
- **24.** Selecting a slide layout
- 25. Manipulating slide information within normal and outline view
- **26.** Formatting and proofing text
- 27. Pictures and backgrounds
- **28.** drawing toolbar
- 29. AutoShapes
- **30.** Using clipart
- **31.** Selecting objects
- **32.** Grouping and un-grouping objects
- 33. The format painter. Creating and running a slide show
- **34.** Navigating through a slide show
- **35.** Slide show transitions
- **36.** Slide show timings
- **37.** Animation effects

## **Microsoft Internet Explorer 5 & the Internet**

- **38.** Connecting to the Internet
- **39.** The Internet Explorer program window
- **40.** The on-line web tutorial Using hyper links
- **41.** Responding to an email link on a web page
- **42.** Searching the Internet
- **43.** Searching the web via Microsoft Internet Explorer
- **44.** Searching the Internet using Web Crawler
- **45.** Searching the Internet using Yahoo

- **46.** Commonly used search engines
- 47. Favorites, security & customizing Explorer
- **48.** Organizing Favorite web sites
- **49.** Customizing options general, security, contents, connection, programs, advanced

## **Using the Address Book**

- **50.** Adding a new contact
- **51.** Creating a mailing group
- **52.** Addressing a message
- **53.** Finding an e-mail address
- **54.** Using electronic mail
- **55.** Starting Outlook Express
- **56.** Using the Outlook Express window
- **57.** Changing the window layout
- **58.** Reading file attachment
- **59.** Taking action on message-deleting, forwarding, replying

## **Email & newsgroups**

- **60.** Creating and sending emails
- **61.** Attached files
- **62.** Receiving emails
- **63.** Locating and subscribing to newsgroups
- **64.** Posting a message to a newsgroup
- **65.** Chatting on internet.
- **66.** Understating Microsoft chat environment
- **67.** Chat toolbar.

## **Text Books:-**

 Introduction to computing systems, by Patt and Patel, Tata McGraw-Hill Publishing Company, Second Edition, 2007

Course Code : DElnE Semester : First

**Subject Title: Student Centered Activity/Test** 

	achi chen	_	Paper Hours		Examination Scheme											
L	T	P		The	eory	Test	Total		P		О		TW			
				Max	Min		Max	Max Min		Min	Max	Min	Max	Min		
-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	

## Rationale:-

Most of the diploma holders join industries. Due to globalization and competition in the industrial and service sectors the selection for the job is based on campus interviews or competitive tests.

While selecting candidates a normal practice adopted is to see general confidence, ability to communicate and attitude, in addition to basic technological concepts.

The purpose of introducing professional practices is to provide opportunity to students to undergo activities which will enable them to develop confidence. Expert lectures, E-learning sources, E-library, Internet, seminars on technical topics and group discussion are planned in a semester so that there will be increased participation of students in learning process.

### Objectives:

The Student will be able to:

- 1. Acquire information from different sources
- 2. Prepare notes for given topic
- 3. Present given topic in a seminar
- 4. Interact with peers to share thoughts
- 5. Take the advantages of E-learning sources