Faculty of Engineering & Technology
P.K.University
Shivpuri (MP)

Syllabus and
Evaluation Scheme

DIPLOMA
Electrical & Electronics Engineering

3RD SEMESTER

(Effective from Session: 2025-26)

DIPLOMA ELECTRICAL & ELECTRONICS ENGINEERING

Study And Evaluation Scheme For Diploma Electrical & Electronics Engineering

SEMESTER -III

SUBJECTCODE	SUBJECTSNAME	STUDY SCHEME Periods/ Week			Credits	MARKS IN EVALUATION SCHEME						Total Marks of Internal & External
						INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT			
		L	T	P		Th	Pr	Tot	Th	Pr	Tot	
DFUNCEX301	Functional Communication	3	0	0	3	30	-	30	70	-	70	100
DAPPLEX302	Applied Mathematics-III	3	1	0	4	30	-	30	70	-	70	100
DPRINEX303	Principles of Digital Electronics	2	1	0	3	30	-	30	70	-	70	100
DELECEX304	Electrical Machine	3	1	0	4	30	-	30	70	-	70	100
DELECEX305	Electrical & Electronics Measurements	3	0	0	3	30	-	30	70	-	70	100
DPRINEX306	Principles of Digital Electronics Lab	0	0	2	1	-	25	25	-	25	25	50
DFUNCEX307	Functional Communication Lab	0	0	2	1	-	25	25	-	25	25	50
DELECEX308	Electrical & Electronics Measurements Lab	0	0	2	1	-	25	25	-	25	25	50
DELECEX309	Electrical Machine Lab	0	0	2	1	-	25	25	-	25	25	50
DCOMPEX310	Computer Application Lab	0	0	4	2	-	25	25	-	25	25	50
Total		14	3	12	23	150	125	275	350	125	475	750

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II Year III Semester

L	T	P
3	0	0

DFUNCEX301: Functional Communication

Section "A" (English)

Text Lessons

UnitI. On Communication
Unit.II Exploring Space
Unit.III Sir C.V.Raman
Unit.IV Professional Development of Technicians
Unit.V Buying a Second Hand Bicycle
Unit.VI Leadership and Supervision
Unit.VII First Aid
Unit.VIII The Romanance of Reading
Unit.IX No Escape from Computers
Unit.X Bureau of Indian Standards

Section "B" Hindi

1& Lojkstxkj
2& Hkkjrh; oSKkfudksa ,oarduhfd;ksadkHkkjr ds fodklesa ;ksxnku
3& xzkE; fodkl
4& ifjokjfu;kstu
5& lkekftdlaLFkk;sa
6& fu;kstuvkSjtudY;k.k
7& HkkjresaizkS|Skfxdh ds fodkldkbfrgkl
8& gfjrdzkafUr
9& i;kZoj.k ,oaekuoiznw"k.k
10& JfeddY;k.k
11& HkkjresaJfedvkUnksyu

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DAPPLEX302 APPLIED MATHEMATICS III

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1. MATRICES:

1.1 Algebra of Matrices, Inverse: Addition, Multiplication of matrices, Null matrix and a unit matrix, Square matrix, Symmetric, Skew symmetric, Hermitical, Skew hermit ion, Orthogonal, Unitary, diagonal and Triangular matrix, Determinant of a matrix. Definition and Computation of inverse of a matrix.

1.2 Elementary Row/Column Transformation: Meaning and use in computing inverse and Rank of a matrix.

1.3 Linear Dependence, Rank of a Matrix: Linear dependence/independence of vectors, Definition and computation of a rank of matrix. Computing rank through determinants, Elementary row transformation and through the concept of a set of independent vectors, Consistency of equations.

1.4 Eigen Pairs, Cayley-Hamilton Theorem :Definition and evaluation of Eigen values and Eigen vectors of a matrix of order two and three, Cayley-Hamilton theorem (Without Proof) and its verification, Use in finding inverse and powers of a matrix.

2. DIFFERENTIAL CALCULUS:

2.1 Function of two variables, identification of surfaces in space, coincides

2.2 **Partial Differentiation**: Directional derivative, Gradient, Use of gradient f, Partial derivatives, Chain rule, higher order derivatives, Eulers theorem for homogeneous functions, Jacobians.

2.3 **Vector Calculus:** Vector function, Introduction to double and triple integral, differentiation and integration of vector functions, gradient, divergence and curl, differential derivatives.

3. DIFFERENTIAL EQUATION:

3.1 Formation, Order, Degree, Types, Solution: Formation of differential equations through physical, geometrical, mechanical and electrical considerations, Order, Degree of a differential equation, Linear, Nonlinear equation.

3.2 First Order Equations: Variable separable, equations reducible to separable forms, Homogeneous equations, equations reducible to homogeneous forms, Linear and Bernoulli form exact equation and their solutions.

3.3 Higher Order Linear Equation: Property of solution, Linear differential equation with constant coefficients (PI for X=eax, Sin ax, Cos ax, Xn, eaxV,XV.

3.4 Simple Applications: LCR circuit, Motion under gravity, Newton's law of cooling, radioactive decay, Population growth, Force vibration of a mass point attached to spring with and without damping effect. Equivalence of electrical and mechanical system

4. INTEGRAL CALCULUS - II:

4.1 Beta and Gamma Functions: Definition, Use, Relation between the two, their use in evaluating integrals.

4.2 Fourier series: Fourier series of f(x),-n<x<n, Odd and even function, Half range series.

4.3 Laplace Transform : Definition, Basic theorem and properties, Unit step and Periodic functions, inverse Laplace transform, Solution of ordinary differential Equations.

5. PROBABILITY AND STATISTICS:

5.1 Probability: Introduction, Addition and Multiplication theorem and simple problem.

5.2 Distribution: Discrete and continuous distribution, Binomial Distribution, Poisson Distribution, Normal Distribution

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2	1	0

DPRINEX303: PRINCIPLES OF DIGITAL ELECTRONICS

1. INTRODUCTION TO DIGITALELECTRONICS:

1.1 Basic difference between analog and digital signal.

1.2 Application and advantages of digital signal processing.

2. NUMBERSYSTEM:

2.1 Binary, Octal and Hexadecimal number system; conversion from decimal octal and hexadecimal to binary and vice-versa.

2.2 Binary addition, subtraction, multiplication and division including binary points.

3. 1's and 2's complements method of subtraction.

4. CODES, CODE CONVERSION AND PARITY:

4.1 The 8421 and excess-3 codes; mention of other popular BCD codes.

4.2 Addition of 8421, BCD coded numbers its limitations and excess-3 coded numbers.

4.3 Gray code, Gray to binary conversion and vice-versa.

4.4 Basic concept of parity, single and double parity and error detection.

1. LOGICGATES:

1.1 Definition, symbols and truth tables of NOT, AND, OR, NAND, NOR, EXOR Gates.

1.2 Concept of negative and positive logic.

2. LOGIC SIMPLIFICATIONS

2.1 Boolean algebra, Karnaugh-mapping (up to 4 variables) and simple application in developing combinational logic circuits.

2.2 Implementation of logic equations with gates.

2.3 Use of NAND and NOR gates as universal gates.

3. LOGIC FAMILIES AND DIGITALICS:

3.1 Logic family classification:

(a) Definition of SSI, MSI, LSI, VLSI.

(b) Bipolar Logic, Diode Logic, Transistor Logic Inverter, TTL logic, MOS,CMOS logic, logic ECL

(c) Sub-classification of TTL and MOS logic families.

(d) Characteristics of TTL and MOS Digital gates delay,

4. Speed of noise margin, logic levels, power dissipation, FAN-IN, FAN-OUT, power supply requirements and comparison between TTL and MOS ICs.

4.1 Logic Circuits:

(a) Open collector and to tempole output circuit operation for a standard TTL, NAND gate.

4.2 MOS circuit operation for a standard gate (NOR). Tristate Switch: Normally open and normally closed switch.

4.3 Familiarization with commercial digital IC gates, their number identification and Pincon figuration.

5. ARITHMETI COPERATIONS:

5.1 Design of Exclusive or, Half adder and Half subtract or.

5.2 Design of Full adder circuits and its operation.

5.3 Design of Full subtract or circuits and its operation.

5.4 Some examples (circuits) of code convertors.

6. ENCODER, DECODERS & DISPLAY DEVICES ASSOCIATED CIRCUITS:

6.1 LED, LCD, seven segment display, basic v operation of various commonly used types.

6.2 Four Decoder circuits for 7 segment display.

6.3 Basic decimal to BCD encoder circuits.

6.4 Use of decoders/driver ICs with reference to commercial ICs.

6.5 Basic Multiplexer and Demultiplexer

7. FLIPFLOPS:

7.1 Operation using waveforms and truth tables of following flip flops.
RS, T, RST, D, JK, Master/Slave JK Flip Flops Mention of commonly used ICs Flip flops.

8. COUNTERS:

8.1 Counters classification.

8.2 Binary and decade counters.

8.3 Divide by N counters.

8.4 Programmable asynchronous counters.

8.5 Down counters up/down counter operations.

8.6 Presentable asynchronous counters.

8.7 Difference between asynchronous and synchronous counters.

8.8 Ring counters with timing diagram.

8.9 Familiarization with commercial TTL/CMOS counter ICs.

9. SHIFTREGISTERS:

9.1 Introduction and Basic concepts including shift left and shift right.

9.2 Serial in serial out. Serial in parallel out. Parallel in serial out. Parallel in parallel out.

9.3 Universal shift register.

9.4 Familiarization with common TTL/CMOSICs.

9.5 Buffer register, Tristate Buffer Register.

10. MEMORIES:

10.1 Classification according to the following heads.

(a) Volatile and non-volatile memories.
(b) Random access memories and sequential access.
(c) Semiconductor and non-semiconductor memories.
(d) Destructive and non-destructive memories.

10.2 Semi-conductor ROMs, PROMs, EPROM, SRAM, DRAM, Basic structure and working of CCD, R/W memory.

11. A/D AND D/ACONVERTERS:

11.1 Use of A/D and D/A converters.

11.2 Binary resister network R-2R network.

11.3 D/A converter usingR-2R.

11.4 UP, UP/Down counter type A/D converter.

11.5 Successive approximation.

11.6 Basic concepts of parallel A/D converter.

11.7 Two bit A/D converter.

12. ARITHMETIC CIRCUITS: IdeasAbout

12.1 Basic Arithmetic logic unit's applications.

12.2 Block diagram explanation of binary multiplier circuit.

List of Books

1. Malvino & Leach-Digital Principles &Application- Mcgraw Hill- 5thEdition.
2. Mano, M. Morris- Digital Logic and Computer Design-Prentic Hall(India)

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II Year III Semester

DELECEX304: ELECTRICAL MACHINE

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1. Generalized Theory of Electrical Machine

1.1 Definitions of motor and generator.

1.2 The principle of Electro Mechanical Energy Conversion.

1.3 Elementary concept of generator and motor

2. D.C. Machines

2.1 Construction of d.c. machines.
2.2 E.M.F. equation
2.3 Electromagnetic torque (torque equation)
2.4 Principle of generating and motoring action.
2.5 Speed and torque equation
2.6 Armature reaction and commutation in d.c.m/cs.
2.7 Factors controlling speed of d.c.motor.
2.8 Speed control methods and starters for d.c.m/cs.
2.9 Characteristics and application of D.C. generators and motors.

3. Transformer

3.1 Classification, construction, principle and working of 1 ph. and 3 ph. transformer.
3.2 E.M.F. equation.
3.3 Phasor diagram on no load and load.
3.4 Transformer connections.
3.5 Losses and efficiency.
3.6 Voltage drops and regulation.
3.7 Connections for parallel operation.
3.8 Cooling
3.9 Testing of transformer as per IS specification (Type test and routine test, etc.)
3.10 Special transformer- Auto transformer, rectifier transformer, dry type transformer, furnace transformer earthing transformer, traction transformer and its use.
3.11 Welding transformer: constructional detail, comparison between power and welding transformer.

4. A. C. Generator(Alternator)

Working principle, construction, Full pitch and short pitch winding, pitch factor or coil span factor, distribution or winding factor, E.M.F. equation, rating of alternators, armature reaction, voltage drops in alternator, vector diagram of loaded alternator, voltage regulation and its determination, Efficiency of alternator, conditions for parallel operation, Methods of parallel operation, operation of alternators when connected to infinite bus bar.

5. Synchronous Motor

Construction, working principle, effect of load on synchronous motor, effect of change in excitation on the performance of synchronous motor, V curves, torque& mechanical power developed condition for max. Mechanical power, synchronous condenser, hunting and its elimination, comparison between ind. motor and synch. Motor, starting methods and uses of synch. motor.

6. Induction Motor

Rotating magnetic field for 3 ph. concept of motors and its reversing.

1 Construction and working of 3 ph. induction motor (squirrel cage and wound rotor motor). Double squirrel cage induction motor.

2 Rotor frequency, rotor e.m.f., rotor current and rotor power factor.

3 Torque equation

4 Torque slips characteristics.

5 Principle and methods of speed control

6 Methods of starting of induction motor. On line, auto transformer, star delta manual/automatic starters for induction motor. Starter for slip ring induction motor.

7 Application of induction motor.

8 Testing of motor as per I.S. Performance of 3 phase induction motor with the help of circle diagram.

10. Losses and efficiency (simple problems only)

11. Phaser diagram of induction motor.

7. Single Phase Induction Motors

1. Classification of F.H.P. motors
2. Production of rotating Magnetic field in 1 ph. motors.
3. Double revolving field theory.
4. Construction working and application of

(i) Capacitor motor (all types)
(ii) Shaded pole motor
(iii) 1 ph. synchronous motor
(iv) 1 ph. series and universal motor
(v) Servomotor

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II Year III Semester
DELECEX305: ELECTRICAL AND ELECTRONIC MEASUREMENTS

1 Introduction to electrical measuring instruments:

1.1 Concept of measurement and instruments.

1.2 Electrical quantities and instruments for their measurements.

2.1 Measurement and Errors. Accuracy, precision, types of errors, probability of errors and Gaussian Errors curve, sensitivity, resolution and stability. Classification of errors.

2.2 Types of electrical measuring instruments, indicating, integrating and recording instruments.

2.3 Essentials of indicating instruments deflecting, controlling and damping torques.

6. Miscellaneous Measuring Instruments:
The construction, working principle and application of: ohm- meter, meggar, earth tester, multi meter, frequency meter (reed-type) single phase power factor meter (Electrodynamometer type), 3-phase power factor meter, phase sequence indicator, synchrono scope.

4. Elements of Process Instrumentation

4.1 Block diagram of process instrumentation system and purpose of each block.

4.2 Basic principles of various sensors/transducers for measurement of temperature, pressure, strain a n d liquid level.

5. ELECTRONICMULTIMETER:

5.1 Advantage over conventional multimeter for voltage measurement with respect to input impedance and sensitivity, principles of voltage, current and resistance measurements.

5.2 Specification of electronic multimeter and their significance.

6. CATHODE RAYOSCILLOSCOPE:

6.1 Construction of CRT, Electron gun, Electrostatic focusing and acceleration (Explanation only-no mathematical treatment) Deflection sensitivity, Brief mention of screen phosphor for CRT. Internal Block Diagram of CRO.

6.2 Explanation of time base operation and need for blanking during fly back, synchronization.

6.3 Block diagram and explanation of a basic CRO and a triggered sweep oscilloscope, front panel controls.

6.4 Specifications of CRO and their significance.

6.5 Use of CRO for the measurement of voltage (D.C. &A.C.) frequency using Lissagious figure, time period, phase.

6.6 Special features of dual trace, delayed sweep and storage CROs (Brief mention only).

6.7 Brief idea of Digital Storage Oscillo scope.

7. AUDIO POWERMETER:

7.1 Block diagram of an audio power meter.

7.2 Principles of working its application and high frequency limitations.

7.3 Scale conversion from power to db.

8. IMPEDANCE BRIDGES QMETERS:

8.1 D.C. and A.C. Bridges:

D.C. bridges- Wheat stone bridge, Kelvin bridges, Sensitivity- Null indicators.

A. C. Bridges - Inductance bridges (Maxwell bridge), Capacitance bridges, Hays bridge, Anderson bridge, Schering bridge, Wein bridge, Twin network, Storage factor, Dissipation factor and their measurements.

8.2 Block diagram explanation and working principle of laboratory types (balancing type) RLC Bridge. Specifications of a RLC bridge, Principle of digital RLC bridge.

8.2 Block diagram and working principles of a Q meter.

9. DIGITALINSTRUMENTS:

9.1 Comparison of Analog and Digital instruments, characteristics of digital meter.

9.2 Working principle of Ramp, Dual slope and integrating type of digital voltmeter.

9.3 Block diagram and working of a digital multimeter.

9.4 Working principle of time interval frequency and period measurement using universal counter, frequency counter, time base stability and accuracy and resolution.

List of Books:

1. A. K. Sawhney- A course in Electrical &Electronic Measurement & Instrumentation – Dhanpat Rai & Sons
2. Helfric & Cooper –Modern Electronic Instrumentation and Measurement Techniques-PHI

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II Year III Semester

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DPRINEX306: PRINCIPLES OF DIGITAL ELECTRONICS LAB

List of Experiments

1. Do at least 20 experiments familiarization with bread-board. Familiarization with TTL and MOS ICs.
2. Identification of Ic-nos, Pin-nos, Ic types.
3. To observe that logic low and logic high do not have same voltage value in input and output of logic gate.
4. To observe the propagation delay of TTL logic gate.
5. Observation of the difference between MOS and TTL gates under the following heads
   - (a) Logic levels.
   - (b) Operating voltages.
   - (c) Propagation delay.

Display Devices And Associated Circuits.

6. Familiarization and use different types of LEDs common anode and common cathode seven segment display.
7. Use of 7447 BCD to 7-segmentdecoder. Logic Gates.
8. Verification of truth table for 2 Input NOT, AND,OR, NAND, NOR, XOR Gates. Design and Implementation of Simple Logic Circuits.
9. To construct a 4-bit even/odd parity generator/checker using XOR gates and to verify their truth tables.
10. To construct half adder and half subtract or using XOR and NAND gates verification of their truth tables.
11. To construct a full adder circuit with XOR and NAND gates.

12. (a) Study of 3 bit adder circuit implemented with or and NAND gates.

(b) To construct 4 bit adder and full subtract or using full adder chip 7480 and NAND gates.

13. (a) To verify the truth table of 4 bit adder IC chip7483.

(b) To construct the 4 bit adder/2'scomplement subtract or using 7483 and NAND gates.

Flip Flops.

14. To verify the truth table for selected positive edge triggered and negative edge triggered F/F of J-K and D type.

Counters

15. To construct and verify truth table for a synchronous binary and decade using J- K flip flops.

16. (a) To construct device by 60 counter using ripple.

(b) To use counter IC chip 7493 in the divide by eight mode and divide by sixteen mode.

(c) To construct a divide by 100 counter using CMOS.

17. To construct a divideby60 counters using synchronous counter IC chips.

Registers.

18. To construct a 4 bit buffer register using 4 bit register IC chip.

19. To construct a 4 bit universal shift register using flip flops.

20. To use a 4035 B universal shift register.

Multiplexers and DE multiplexers.

21. To decode a 3 line to 8 line encode from 8lineto 3 line and to observe inputs and outputs.

22. Single plus to 16 line decoder and observation output after a 16 to 4 line encoder.

23. To use ALU chip for selected arithmetic and logic operations.

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DFUNCEX307

Functional Communication Lab

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1. **Listening •** The student should be able to listen to a text read aloud in normal speed with
    i. focus on intonation.
    - After listening the student can fill-in-blanks, choose a suitable title, make a
        i. summary, supply required information and be able to answer comprehension
        ii. questions from the passage read aloud.
2. **IMPORTANCE OF LISTENING**, Characteristics of Good and Effective Listener(Is Attentive, Do Not Assume, Listen for Feelings and Facts, Concentrate on the Other Speakers Kindly and Generously, Opportunities)
3. **Speaking •** Reading aloud of dialogues, texts, poems, speeches focusing on intonation.
    - Self-introduction • Role plays on any two-situations. • Telephonic Conversations.
4. **NON-VERBAL COMMUNICATION-** Communication Skills
    Non-Verbal Communication, We Communicate with Our Eyes, Communication with Facial
    Expression, A Good Gesture, Appearance, Posture and Gait, Proximity and Touch),
5. **Communication Skills ACTIVITIES –**Activities in Making Collages, Making Advertisements, PPT Preparation & Presentation, Speaking -Seminars, Group Discussions, Debates, Extempore Speeches, Listening to an audio clip and telling its Agist, Answering a telephone call, Making enquiries, General tips- Pronunciation, Tone, Pitch, Pace, Volume, relevance, brief, simple Reading Newspaper, Magazines (Current Affairs, Economic magazines, Technical magazines), How to read a report, article, Writing- Resume Writing, Writing joining report, Notice writing, Report making, Proposal writing, Advertisement, Notice for tender, Minutes writing, E-Mail writing, Listening News, Listening to audio clips.(Lecture, poetry, speech, songs),
6. **Body Language skills-**Introduction, What is Body Language , Body Language Parts, Personal Space Distances (Intimate Distance, Personal Distance, Social Distance, Public Distance),

7. IMPORTANT BODY LANGUAGE SIGNS AND THEIR MEANING

PERSONALITY DEVELOPMENT

1 Introduction to Personality Development

AIM, Skills, Types of Skills, LIFE SKILLS VS OTHER SKILLS,

Concept of Life Skills. Ten core Life Skills identified by WHO

2. Factors Influencing / Shaping Personality :

Introduction, Physical and Social Factors Influencing / Shaping Personality (Hereditary, Self- Development, Environment, Education, Life-situations) Psychological AND Philosophical Factors Influencing / Shaping Personality (Past Experiences, Dreams and Ambitions, Self-Image, Values)

3. Self Awareness – 1

DIMENSIONS OF SELF AWARENESS (Self Realization, Self Knowledge or Self Exploration, Self Confidence, Self Talk, Self Motivation, Self Esteem, Self Image, Self Control, Self Purpose, Individuality and Uniqueness, Personality, Values, Attitude, Character),

SELF REALIZATION AND SELF EXPLORATION THROUGH SWOT ANALYSIS AND JOHARI WINDOW,

4. Self Awareness – 2

SYMPATHY VS EMPATHY AND ALTRUISM,

Importance of Empathizing with Others,

5. Self Awareness – 3

Self-Awareness through Activity, Body Image (What is Body Image, What Decides our Body Image, What is Poor Body Image, What are the Harmful Effects of Poor Body Image), Tackling Poor Body Image(Enhance Self-Esteem, Build Up Critical Thinking, Build up Positive Qualities, Understand Cultural Variation, Dispel Myths, Utilize Life Skills)

1. 6. Change Your Mind Set
2. What is Mindset, HOW TO CHANGE YOUR MINDSET (Get the Best Information Only, Make the best people your Role Model, Examine Your Current Beliefs, Shape Your Mindset with Vision and Goals, Find Your Voice, Protect Your Mindset, Let Go of Comparisons, Put An End To Perfectionism, Look At The Evidence, Redefine What Failure Means, Stop Worrying About What "People" Think)

- Achieving the target

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DELECEX308: ELECTRICAL AND ELECTRONICS MEASUREMENT LAB

1. To extend the range of an ammeter/voltmeter.
2. To convert an ammeter into voltmeter.
3. To measure power, power factor in a l-phase circuit using wattmeter and power factor meter and verify results with calculations.
4. Measurement of voltage, frequency of a sinusoidal signal with C.R.O.
5. Measurement of resistance, voltage, current with electronic multimeters (Analog & Digital) and compare threading.
6. To calibrate three phase energy meter with the help of standard 3 phase energy meter.
1. Measurement of Q of a coil and its dependence on frequency using a Q meter.
2. To test a power supply for ripple, line and load regulation, Tracing of wave form, To find out operating range of power supply.
3. Measurement of distortion of a LF signal generator using distortion factor meter.
4. Measurement of R.L. and Cusing a LRC bridge/universal bridge.

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DELECEX309: ELECTRICAL MACHINE-I LAB

L	T	P
0	0	2

1. Measurement of induced emf and magnetizing current under open circuit condition in D.C. generators.

2. Determination of the relationship between terminal voltage and load current keeping speed constant for

   (a) Separately excited generator keeping excitation constant
   (b) D.C. shunt generator.

3. To measure the variation in no load speed of a separately excited d.c. motor for the variation in

   (a) Armature circuit resistance

   (b) Field circuit resistance.

4. Measurement of the speed of a d.c. series motor as a function of the load torque.

5 (a) No-load and short circuit test on a single phase transformer.
   (b) Determination of Efficiency and Regulation of transformer.

6. To determine performance characteristics of apoly phase induction motor. (load v/s efficiency, load v/s power factor, load v/s slip)

7. To start a 3 phase induction motor and to determine its slip at various loads.

8. To determine V curves of a synchronous motor.

9. To perform open circuit and block rotor test on a 3ph. induction motor and to determine its efficiency.

10. To perform open circuit and short circuit test on a 3ph. synchronous machine and to determine synchronous impedance and regulation at lagging/leading power factor.

11. Achieving high starting torque in case of 3 phase slip ring motor by increasing external resistance in rotor circuits and determine speed regulation at different loads

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0	0	2

DCOMPEX310:COMPUTER APPLICATION LAB

List of Practicals

1. Practice on utility commands in DOS.
2. Composing, Correcting, Formatting and Article (Letter/Essay/ Report) on Word Processing tool Word and taking its print out.
3. Creating, editing, and modifying tables in Database tool.
4. Creating labels, report, and generation of simple forms in Database tool.
5. Creating simple spread sheet, using in built functions in Worksheet tool.
6. Creating simple presentation.
7. Creating mail ID, Checking mailbox, sending/reply in g-mails.
8. Surfing web sites, using search engines.

Note : In the final year, related students have to use the concept of MS Word/MS Excel/MS Access/ MS Power Point in their respective branch's project work such as creating project report through MS Word/Creation of statistical data in MS Excel/Creation of database in MS Excel/ Demonstration of project through Power Point Presentation.