

**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**

**Mid Semester Examination-I Syllabus (Summer-2018)**

**Semester-II**

**Name of Subject: COMMUNICATION SKILLS**

**Subject Code : 2110002**

<b><u>Unit No.</u></b>	<b><u>Topic Name</u></b>
1	BASICS OF COMMUNICATION SKILLS
2	EFFECTIVE PRESENTATION STRATEGIES
3	LISTENING ABILITY

Prerna Pandya

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

**Name of Subject: Computer Programming and Utilization**

**Subject Code : 2110003**

<u>Unit No.</u>	<u>Topic Name</u>
1	Introduction to computer and programming: Introduction ,Basic block diagram and functions of various components of computer, Concepts of Hardware and software, Types of softwares, Compiler and interpreter, Concepts of Machine level, Assembly level and high level programming ,Flow charts and Algorithms.
2	Fundamentals of 'C' Features of C language, structure of C Program, comments, header files, data types, constants and variables, operators, expressions, evaluation of expressions, type conversion, precedence and associativity, I/O functions
3	Control structure in 'c' Simple statements, Decision making statements, Looping statements, Nesting of control structures, break and continue , goto statement

Kapil Shukla

Kinjal Thakar

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

**Name of Subject: Elements of Electrical Engineering**

**Subject Code : 2110005**

<u>Unit No.</u>	<u>Topic Name</u>
Unit:1 (A)	Introduction of Electrical Current, Voltage, Power and Energy; Sources of Electrical Energy, Independent and Dependent Source, Source conversion; Ideal electrical circuit elements - Resistor, Inductor and Capacitor, Fundamental laws of electric circuits - Ohm's Law and Kirchhoff's Laws; Analysis of series, parallel and series-parallel circuits, Star – Delta conversion
Unit:1 (B)	Electric charge and Laws of electrostatics, Definitions - Electric field, lines of force, electric field intensity, electric flux and flux density, Electrostatic induction and Gauss's law and its application, Dielectric strength; Capacitor, Capacitor in series and parallel, Energy stored in a capacitor, charging and discharging of capacitor.
Unit:2 (A)	Generation of sinusoidal voltage, Definition of average value, Root mean square value, Form factor and peak factor, Power factor, Phasor representation of alternating quantities, Analysis with phasor diagrams of purely resistive circuits, Analysis with phasor diagrams of purely inductive circuits, Analysis with phasor diagrams of purely capacitive circuits, Analysis with phasor diagrams of R-L, Concepts of Real power, Reactive power, Apparent power, Analysis with phasor diagrams of R-C, R-L-C Circuits.

Prof. Mihir Parikh

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

**Name of Subject: ELEMENTS OF MECHANICAL ENGINEERING**

**Subject Code: 2110006**

Chapter No.	Topic
1	<b>Introduction:</b> Prime movers and its types, Concept of Force, Pressure, Energy, Work, Power, System, Heat, Temperature, Specific heat capacity, Change of state, Path, Process, Cycle, Internal energy, Enthalpy, Statements of Zeroth Law and First Law
2	<b>Properties of gases:</b> Gas laws, Boyle's law, Charle's law, Combined gas law, Gas constant, Relation between $C_p$ and $C_v$ , Various non-flow processes like constant volume process, constant pressure process, Isothermal process, Adiabatic process, Poly tropic Process
3	<b>Steam Boilers:</b> Introduction, Classification, Cochran, Lancashire and Babcock and Wilcox boiler, Functioning of different mountings and accessories
4	<b>Internal Combustion Engines:</b> Introduction, Classification, Engine details, four-stroke two-stroke cycle Petrol/Diesel engines, Indicated power, Brake Power, Efficiencies
5	<b>Refrigeration &amp; Air Conditioning:</b> Refrigerant, Vapor compression refrigeration system, vapor absorption refrigeration system, Domestic Refrigerator, Window and split air conditioners

Jenish Patel  
Subject Coordinator

Dr. Poonam Darbar  
Head of Dept.

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

**Name of Subject :** Environmental Studies

**Subject Code** : 2110007

<u>Unit No.</u>	<u>Topic Name</u>
01	Introduction to Environment
03	Renewable & Non-Renewable Resources
04	Water Resources
08	Water Pollution
09	Air Pollution
11	Energy Resources

**Jay Shah**

Subject Coordinator

**Dr. Poonam Darbar**

Head of Dept.

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

Name of Subject: Engineering Physics

Subject Code : 2110011

<u>Unit No.</u>	<u>Topic Name</u>
<b>UNIT: 3</b>	<b>ACOUSTIC AND ULTRASONICS</b>  <b>Chapter Name: ARCHITECTURAL ACOUSTICS</b>  Introduction, Classification and Characteristics of sound, Sabine's formula for reverberation (Without Derivations), Introduction of Absorption co-efficient, Sound absorbing materials, Factors affecting the acoustics of building and their remedies Sound Insulation, Noise Pollutions, and Noise Control in machines.  <b>Chapter Name: ULTRASONICS</b>  Properties of ultrasound, Generation of ultrasound by (1) Piezoelectric method and (2) Magnetostriction method, Methods for Ultrasound Velocity Measurement Applications of ultrasound: Industry, Medicine, NDT through Ultrasonic
<b>UNIT: 4</b>	<b>SUPERCONDUCTIVITY</b>  Superconductivity, General Properties of superconductors, Types of Superconductors, High Temperature superconductors, Applications: Magnets, Josephson effect, SQUID, Maglev and others.
<b>UNIT: 5</b>	<b>NON-LINEAR OPTICS</b>  <b>Chapter Name: LASER:</b>  Introduction, Characteristics of laser radiation, Spontaneous and stimulated emission, Working of LASER with basic idea about Population Inversion, Pumping mechanism, Optical Resonators, Nd: YAG LASER, Applications of LASER: Medical, Industrial, Communication and others.

A/Prof. Harsh Solanki

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.

**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**

**Mid Semester Examination-I Syllabus (Summer-2018)**

**Semester-II**

**Name of Subject: Engineering Graphics**

**Subject Code : 2110013**

<b><u>Unit No.</u></b>	<b><u>Topic Name</u></b>
1	Practice Sheet
2	Plain Scale and Diagonal Scale
3	Engineering Curves-1
4	Projection of Points and Lines
5	Orthographic and Sectional Orthographic Projections

Shripal Patel

Roshni Kapadia

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.

# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

Name of Subject: VCLA

Subject Code : 2110015

<u>Unit No.</u>	<u>Topic Name</u>
1	<b>Chapter: Matrices &amp; System of Linear Equation</b> <ol style="list-style-type: none"><li>1. Row Echelon Form/Reduced Row Echelon Form and Rank by Row Echelon form method</li><li>2. Gauss Elimination Method</li><li>3. Gauss-Jordan Method</li><li>4. Cramer's Rule</li><li>5. Rank of Matrix by Determinant method</li><li>6. The Inverse of a Square Matrix (using both Row Operations)</li><li>7. Symmetric/Skew Symmetric/ Hermitian/Skew Hermitian/orthogonal Matrices</li></ol>
2	<b>Chapter: Eigen Values &amp; Eigen Vectors</b> <ol style="list-style-type: none"><li>1. Eigen Values and Eigen Vectors</li><li>2. Algebraic &amp; Geometric Multiplicity of Eigen Values &amp; Eigen Vectors</li><li>3. Cayley-Hamilton Theorem</li><li>4. Diagonalization</li><li>5. Orthogonal Diagonalization</li></ol>
3	<b>Chapter: Vector calculus</b> <ol style="list-style-type: none"><li>1. Gradient</li><li>2. Directional Derivative</li><li>3. Divergence &amp; Curl</li><li>4. Solenoidal &amp; Irrotational Vectors</li></ol>

Sandeep Kumar

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.



# SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

## Mid Semester Examination-I Syllabus (Summer-2018)

### Semester-II

**Name of Subject: Basic Electronics**

**Subject Code : 2110016**

<u>Unit No.</u>	<u>Topic Name</u>
1	Circuit Concepts: Electrical Quantities, Lumped Circuit Elements, Kirchhoff's Laws, Meters and Measurements, Analogy between Electrical and other Non-electrical physical systems, a case study.
2	Circuit Analysis Techniques: Classification of electrical networks, Thevenin and Norton Equivalent Circuits, Node-Voltage and Mesh-Current Analysis, Superposition and Linearity, Wye-Delta Transformation, Computer Aided Circuit Analysis, A case study.
4	Digital Building Blocks: Digital Signals, Number systems, Code conversion, Logic operators and logic gates, Boolean (Binary) Algebra, Universal gates, Standard representations for logical functions, Karnaugh-Map (K-map) simplification, Simplification of Boolean expressions using K-map, Binary adders, Multiplexer-Demultiplexer, Encoder-Decoder.

Prof. Tithi Vyas

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.

**SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY**

**Mid Semester Examination-I Syllabus (Summer-2018)**

**Semester-II**

**Name of Subject: CPD**

**Subject Code : 2990001**

<u>Unit No.</u>	<u>Topic Name</u>
1	Who is a Contributor?
2	The Contributors Identity
3	The Contributors Vision of Success
4	The Contributors Vision of Career
5	The Scope of Contributors
6	Embarking on The Journey to Contributor Ship

Nupur Datar

Subject Coordinator

Dr. Poonam Darbar

Head of Dept.