

# ANALOG ELECTRONICS ELECTRONICS ENGINEERING

# Lecture Information

_ecture 00	How to use PD-GD course for Analog Electronics ?	00:44:00

### Chapter 01 BJT Biasing

Introduction to BJT	00:28:28
Symbolic Representation of BJT	00:24:39
Important points of BJT	00:09:03
Order of Cross-sectional area	00:04:51
BJT Configuration	00:27:36
AC & DC Analysis of BJT	00:21:40
Feedback Bias Transistor	00:25:59
Voltage Divider Bias	00:12:50
Workbook Questions (Q1-Q2)	00:19:11
Workbook Questions (Q3-Q5)	00:28:47
Workbook Questions (Q6-Q7)	00:15:58
Workbook Questions (Q8-Q11)	00:25:01
	Introduction to BJT Symbolic Representation of BJT Important points of BJT Order of Cross-sectional area BJT Configuration AC & DC Analysis of BJT Feedback Bias Transistor Voltage Divider Bias Workbook Questions (Q1–Q2) Workbook Questions (Q3–Q5) Workbook Questions (Q8–Q11)

### Chapter 02 ► Region of BJT

Lecture 01	Introduction of Region of Transistor	00:33:27
Lecture 02	Region Assuming Saturation Region	00:13:38

Lecture 03	Workbook Questions (Q1-Q3)	00:36:42
Lecture 04	Workbook Questions (Q4-Q5)	00:19:37
Lecture 05	Workbook Question (Q6)	00:15:33
Lecture 06	Workbook Question (Q7)	00:53:47
Lecture 07	Common Data Question (Q8–Q12)	00:32:04

### Chapter 03 MOSFET Biasing

Lecture 01	Introduction to MOSFET	00:12:01
Lecture 02	Characteristics of MOSFET	00:11:23
Lecture 03	Question Based on MOSFET Biasing	00:10:21

### Chapter 04 Current Mirror Circuit

Lecture 01	Introduction to CMC	00:17:22
Lecture 02	Concept of CMC	00:17:17
Lecture 03	CMC for High Value of Beta	00:27:06
Lecture 04	MOSFET CMC	00:05:29
Lecture 05	Widlar CMC	00:11:12
Lecture 06	Wilson Current Mirror Circuit	00:11:52
Lecture 07	Multiple-Copy CMC	00:08:04
Lecture 08	Workbook Questions (Q1-Q6)	00:20:56

### Chapter 05 Thermal Stabilization and Compensation Technique

Lecture 01	Concept of Operating Point of Transistors	00:43:09
Lecture 02	Concept of Stability Factor s, s' and s"	00:34:41
Lecture 03	Fixed Bias Circuit of Transistor	00:15:09
Lecture 04	Questions Based on Fixed Bias Circuit of Transistor	00:27:35
Lecture 05	Collector Feedback Bias Circuit	00:13:49
Lecture 06	Questions Based on Collector Feedback Bias Circuit	00:18:40
Lecture 07	Voltage Divider Bias or Self Bias	00:13:28
Lecture 08	Questions Based on Voltage Divider Bias or Self Bias	00:49:25
Lecture 09	Emitter Bias or Self Bias	00:20:20
Lecture 10	Bias Compensation Technique	00:22:17
Lecture 11	Comparison of Stability factor of Voltage Divider Bias &	00:22:37
Lecture 12	Thermal Runaway	00:12:09
Lecture 13	Thermal Resistance	00:34:36
Lecture 14	Derating Factor	00:11:42
Lecture 15	AC & DC Load Line of a Voltage DividerCircuit	00:36:16

# Chapter 06 > Operational Amplifier

Lecture 01	Introduction to Op-Amp	00:13:35
Lecture 02	Symbolic Representation	00:13:56
Lecture 03	Transfer Characteristics of Op-Amp	00:27:57
Lecture 04	Comparator Circuit	00:26:33
Lecture 05	Zero Crossing Detector	00:10:34
Lecture 06	VGC (Virtual Ground Concept)	00:40:29
Lecture 07	Ideal Non-inverting Op-Amp	00:12:12
Lecture 08	Ideal Inverting Op-Amp	00:12:25
Lecture 09	Workbook Questions (Q1–Q3)	00:37:27
Lecture 10	Adder	00:19:14
Lecture 11	Special Case of Adder	00:05:53
Lecture 12	Subtractor	00:18:56
Lecture 13	Special Case of Subtractor	00:09:44
Lecture 14	Workbook Questions (Q4–Q7)	00:22:07
Lecture 15	Workbook Questions (Q8–Q11)	00:23:49
Lecture 16	Workbook Questions (Q12–Q14)	00:13:16
Lecture 17	Introduction to Schmitt Trigger Circuit	00:22:38
Lecture 18	Schmitt Trigger Case-1	00:34:29
Lecture 19	Transfer Characteristics (Case-1)	00:10:25
Lecture 20	Schmitt Trigger Case-2	00:37:21
Lecture 21	Schmitt Trigger Case-3	00:28:31
Lecture 22	Conclusion of Schmitt Trigger	00:07:23
Lecture 23	Special Case of Schmitt Trigger	00:22:02
Lecture 24	Workbook Questions (Q15–Q17)	00:17:17
Lecture 25	Workbook Questions (Q18-Q20)	00:29:22
Lecture 26	Workbook Questions (Q21–Q22)	00:06:48
Lecture 27	Ideal Integrator Circuit	00:26:07
Lecture 28	Frequency Response of Ideal Integrator Circuit	00:11:03
Lecture 29	Practical Integrator Circuit	00:16:47
Lecture 30	First Order Low Pass Filter	00:28:48
Lecture 31	First Order High Pass Filter	00:12:21
Lecture 32	Practical integrator as L.P.F	00:18:27
Lecture 33	Unity Gain Frequency	00:21:27
Lecture 34	Ideal Differentiator Circuit	00:17:08
Lecture 35	Practical Differentiator Circuit	00:13:52
Lecture 36	Integrator and Differentiator	00:18:40
Lecture 37	Modified Practical Differentiator Circuit	00:22:01
Lecture 38	Concept of Bandpass and Bandstop Filter	00:16:16
Lecture 39	Filter Analysis using Transfer Function (Part-1)	00:11:48

Lecture 40	Filter Analysis using Transfer Function (Part-2)	00:25:20
Lecture 41	Filter Analysis of RLC Circuit	00:10:50
Lecture 42	All Pass Filter using L.P.F	00:27:48
Lecture 43	All Pass Filter using H.P.F	00:20:46
Lecture 44	Example 1 (Active Filter)	00:11:42
Lecture 45	Example 2 (Active Filter)	00:11:58
Lecture 46	Example 3 (Active Filter)	00:14:07
Lecture 47	Example 4 (Active Filter)	00:09:45
Lecture 48	Example 5 (Active Filter)	00:07:24
Lecture 49	Example 6 (Active Filter)	00:05:54
Lecture 50	Example 7 (Active Filter)	00:04:10
Lecture 51	Example 8 (Active Filter)	00:17:06
Lecture 52	Example 9 (Active Filter)	00:10:28
Lecture 53	Example 10 (Active Filter)	00:12:41
Lecture 54	Example 11 (Active Filter)	00:09:52
Lecture 55	Example 12 (Active Filter)	00:07:21
Lecture 56	Example 13 (Active Filter)	00:08:37
Lecture 57	Workbook Questions (Q23-Q26)	00:23:42
Lecture 58	Workbook Questions (Q27-Q30)	00:30:13
Lecture 59	Workbook Questions (Q31-Q33)	00:30:59
Lecture 60	Workbook Questions (Q34-Q35)	00:42:35
Lecture 61	Introduction to Multivibrator	00:12:52
Lecture 62	Working of AstableMultivibrator	00:45:40
Lecture 63	Calculation of ON Time, OFF Time and Frequency	00:18:20
Lecture 64	Modified AstableMultivibrator	00:11:39
Lecture 65	Workbook Questions (Q36-Q37)	00:12:48
Lecture 66	Working of MonostableMultivibrator	00:29:14
Lecture 67	Calculation of Pulse Width	00:11:05
Lecture 68	Workbook Questions (Q38-Q39)	00:18:09
Lecture 69	Workbook Questions (Q40-Q41)	00:42:30
Lecture 70	Logarithmic Amplifier	00:16:36
Lecture 71	Anti-logarithmic Amplifier	00:14:44
Lecture 72	Designing of Multiplier Circuit	00:05:39
Lecture 73	Designing of Divider Circuit	00:04:57
Lecture 74	Workbook Questions (Q42-Q43)	00:14:27
Lecture 75	Clamper Circuit Using Op-Amp	00:48:43
Lecture 76	AC Parameter of Op-Amp	00:06:17
Lecture 77	Common Mode Rejection Ratio	00:21:07
Lecture 78	CMRR for Subtractor Circuit	00:24:06
Lecture 79	Condition for Zero Noise Gain	00:06:31
Lecture 80	Workbook Questions (Q44-Q47)	00:25:49

Lecture 81	Slew Rate	00:20:23
Lecture 82	Slew Rate Distortion	00:13:14
Lecture 83	Workbook Questions (Q48-Q51)	00:10:40
Lecture 84	DC Parameters of Op-Amp	00:13:28
Lecture 85	Effect of Input Bias Current	00:12:30
Lecture 86	Effect of Input Offset Current	00:19:14
Lecture 87	Effect of Input Offset Voltage	00:15:06
Lecture 88	Workbook Questions (Q52-Q55)	00:09:04
Lecture 89	Workbook Questions (Q56-Q58)	00:08:09
Lecture 90	Precision Rectifier	00:19:38
Lecture 91	Non-inverting Precision half-wave Rectifier (Part-1)	00:35:43
Lecture 92	Non-inverting Precision half-wave Rectifier (Part-2)	00:24:53
Lecture 93	Inverting Precision half-wave Rectifier	00:38:47
Lecture 94	Concept of Full Wave Rectifier	00:13:00
Lecture 95	Precision Full Wave Rectifier	00:19:55
Lecture 96	Modified Precision Full Wave Rectifier	00:33:19
Lecture 97	Workbook Questions (Q59–Q62)	00:23:52
Lecture 98	Differential Amplifier (DC Analysis)	00:29:49
Lecture 99	Differential Amplifier (AC Analysis)	00:27:56
Lecture 100	Instrumentation Amplifier	PDF

# Chapter 07 > Diode Equivalent Circuit

Lecture 01	Syllabus Overview of Analog Electronics	00:16:30
Lecture 02	Basic Diode Operation	00:20:03
Lecture 03	Non Ideal Diode Operation	00:22:23
Lecture 04	Example to Understand Diode Operation	00:32:14
Lecture 05	Open Circuit Test on Diode	00:11:09
Lecture 06	Example on Open Circuit Test	00:14:20
Lecture 07	Short Circuit Test With Example	00:25:18
Lecture 08	Introduction to Diode Equivalent Circuit	00:25:53
Lecture 09	Non Linear Model of Diode Equivalent Circuit	00:06:07
Lecture 10	Practical Model of Diode Equivalent Circuit	00:14:19
Lecture 11	Constant Voltage Drop Model of Diode Equivalent Circuit	00:03:50
Lecture 12	Piece wise Linear Model of Diode Equivalent Circuit	00:05:48
Lecture 13	Ideal Model of Diode Equivalent Circuit	00:09:32
Lecture 14	Small Signal (AC) Model of Diode (Part 1)	00:52:11
Lecture 15	Small Signal (AC) Model of Diode (Part 2)	00:41:09
Lecture 16	Example on Equivalent Circuit Model	00:16:04
Lecture 17	Workbook Questions 1-4	00:49:02

Lecture 18	Workbook Questions 5-9	01:04:50
Lecture 19	Workbook Questions 10-13	00:42:52
Lecture 20	Workbook Questions 14-16	00:57:16

# Chapter 08 > Zener Diode As Regulator

Lecture 01	Introduction to Voltage Regulator	00:29:55
Lecture 02	Zener Diode as Voltage Regulator	00:31:56
Lecture 03	Load Regulation & Line Regulation	00:36:14
Lecture 04	Workbook Questions 1-4	00:34:43
Lecture 05	Workbook Questions 5-10	00:45:04
Lecture 06	Workbook Questions 11-12	00:17:40

# Chapter 09 > Clipper Circuit

Lecture 01	Introduction to Wave Shaping Circuit	00:18:07
Lecture 02	Classification of Clipper Circuit	00:14:32
Lecture 03	Positive Series Clipper Circuit	00:24:42
Lecture 04	Negative Series Clipper Circuit	00:12:55
Lecture 05	Positive Shunt Clipper Circuit	00:12:52
Lecture 06	Negative Shunt Clipper Circuit	00:15:49
Lecture 07	Example 1-2 Based on Series Clipper	00:29:42
Lecture 08	Example 3-4 Based on Series Clipper	00:13:05
Lecture 09	Example 1-2 Based on Series Clipper with VR (Re	00:46:27
Lecture 10	Example 1-2 Based on Shunt Clipper	00:45:14
Lecture 11	Example 3-4 Based on Shunt Clipper	00:41:07
Lecture 12	Workbook Questions 1-3	00:50:59
Lecture 13	Workbook Questions 4-6	01:18:50
Lecture 14	Workbook Questions 7-10	01:08:10
Lecture 15	Workbook Question 11	00:17:50

# Chapter 10 > Clamper Circuit

Lecture 01	Introduction to Clamper circuit	00:21:43
Lecture 02	Positive Clamper Circuit	00:16:15
Lecture 03	Different cases in Positive clamper circuit	01:06:05
Lecture 04	Negative Clamper Circuit	00:29:58
Lecture 05	Peak detector, Ideal diode with RL= Infinite	00:27:47
Lecture 06	Peak detector, Practical diode with RL= Infinite	00:21:28
Lecture 07	Peak detector, Ideal diode with RL= Finite (Envelope Detector)	00:20:36
Lecture 08	Voltage Doubler Circuit	00:11:45
Lecture 09	Voltage Tripler &Quadrupler Circuit	00:27:24

Lecture 10	Workbook Questions 1-4	00:37:51
Lecture 11	Workbook Questions 5-7	00:32:58
Lecture 12	Workbook Questions 8-10	00:40:36
Lecture 13	Workbook Question 11	00:13:59

# Chapter 11 Rectifier & Filter

Lecture 01	Introduction to Rectifier Circuit	00:12:27
Lecture 02	Power Supplies	00:31:23
Lecture 03	Understanding Diode Models for Rectifier Operation	00:53:03
Lecture 04	Half Wave Rectifier Circuit	00:05:21
Lecture 05	Construction of Half Wave Rectifier	00:41:03
Lecture 06	Performance Analysis of Half wave rectifier	01:20:02
Lecture 07	Full Wave Rectifier Center Tapped	00:21:26
Lecture 08	Full Wave Rectifier Working	00:53:51
Lecture 09	Performance Analysis of Full Wave Rectifier (Part 1)	00:12:42
Lecture 10	Performance Analysis of Full Wave Rectifier (Part 2)	00:40:25
Lecture 11	Full Wave Bridge Rectifier Circuit	00:23:02
Lecture 12	Performance Analysis of Full Wave Bridge Rectifier Circuit	00:51:15
Lecture 13	Rectifier with Filter	00:34:07
Lecture 14	Workbook Questions 1-4	00:21:53
Lecture 15	Workbook Questions 5-10	00:34:32

# Chapter 12 Low Frequency BJT Amplifier

Lecture 01	Introduction to Amplifier	00:17:54
Lecture 02	Definition of Input Impedance	00:08:29
Lecture 03	Definition of Output Impedance	00:05:54
Lecture 04	Definition of Voltage Gain	00:07:21
Lecture 05	Definition of Current Gain	00:03:48
Lecture 06	AC Parameter of Amplifier	00:17:01
Lecture 07	BJT Amplifier Configuration	00:11:53
Lecture 08	DC and AC Analysis of BJT (Part-1)	00:26:22
Lecture 09	DC and AC Analysis of BJT (Part-2)	00:07:43
Lecture 10	Transistor as a Two Port Network	00:23:37
Lecture 11	H-parameters of Transistor	00:44:16
Lecture 12	Advantage and Disadvantage of h-parameter	00:06:41
Lecture 13	Derivation of Internal Parameters of BJT	00:34:01
Lecture 14	Approximate Analysis of CE without RE	00:24:24
Lecture 15	Approximate Analysis of CE with RE	00:40:22
Lecture 16	Effect of Emitter Bypass Capacitance	00:11:25

Lecture 17	Common Collector Amplifier	00:32:39
Lecture 18	Common Base Amplifier	00:20:22
Lecture 19	Comparison of CB, CE & CC	00:03:28
Lecture 20	Miller's Theorem	00:16:16
Lecture 21	Dual of Miller's Theorem	00:11:47
Lecture 22	Generalised AC Model (re Model)	00:20:50
Lecture 23	CE without Re (re Model)	00:14:45
Lecture 24	CE with Re (re Model)	00:44:38
Lecture 25	AC Resistance or Dynamic Resistance	00:08:39
Lecture 26	CC and CB Amplifier	00:28:29
Lecture 27	Classification of Amplifier based on Input & Output Resistance	00:48:50
Lecture 28	Basic Concept of Feedback Amplifier	00:12:57
Lecture 29	Sensitivity of Feedback Amplifier	00:08:15
Lecture 30	Frequency Response of Amplifier	00:21:48
Lecture 31	Low Pass Filter with Feedback	00:09:08
Lecture 32	High Pass Filter with Feedback	00:20:45
Lecture 33	Block Diagram of Feedback Amplifier	00:06:57
Lecture 34	Basics of Series [slash] Voltage Mixing	00:10:31
Lecture 35	Basics of Shunt [slash] Current Mixing	00:06:41
Lecture 36	Basics of Shunt [slash] Voltage Sampling	00:06:10
Lecture 37	Basics of Series [slash] Current Sampling	00:04:44
Lecture 38	Voltage-Series Topology	00:15:57
Lecture 39	Analysis of Voltage Series Topology	00:13:47
Lecture 40	Voltage-Shunt Topology	00:09:53
Lecture 41	Analysis of Voltage Shunt Topology	00:09:16
Lecture 42	Current-Series Topology	00:09:44
Lecture 43	Current-Shunt Topology	00:13:15
Lecture 44	Relationship between Avf,Aif,Gmf,Rmf	00:04:41
Lecture 45	Analysis of Feedback Topology	00:06:24
Lecture 46	Example 1 (Feedback Topology)	00:09:58
Lecture 47	Example 2 (Feedback Topology)	00:08:03
Lecture 48	Example 3 (Feedback Topology)	00:07:54
Lecture 49	Example 4 (Feedback Topology)	00:07:56
Lecture 50	Cascade Amplifier	00:16:06
Lecture 51	Loading Effect	00:16:25
Lecture 52	Cascode Amplifier	00:14:04
Lecture 53	Cascode Amplifier Parameters	00:29:30
Lecture 54	Darlington Pair	00:12:20
Lecture 55	Parameters of Darlington Pair	00:27:55
Lecture 56	Analysis of 3-db frequency	00:14:18
Lecture 57	Cascade connection of LPF and HPF	00:10:25

Lecture 58	Parallel connection of LPF and HPF	00:08:56
Lecture 59	Frequency response of multistage amplifier	00:37:11
Lecture 60	Questions Based on Feedback & Cascade Amplifier	00:43:30

### Chapter 13 MOSFET Amplifier

Lecture 01	Introdution to MOSFET Amplifier	00:38:01
Lecture 02	Small Signal Model (Triode Region)	00:32:32
Lecture 03	Small Signal Model (Saturation Region, $\lambda$ =0)	00:14:42
Lecture 04	Small Signal Model (Saturation Region, $\lambda \neq 0$ )	00:18:13
Lecture 05	MOSFET Common Source Amplifier	00:22:45
Lecture 06	MOSFET Common Drain Amplifier	00:25:45
Lecture 07	MOSFET Common Gate Amplifier	00:18:58
Lecture 08	Questions on MOSFET Amplifier (1-4)	01:13:25
Lecture 09	Questions on MOSFET Amplifier (5-8)	01:17:18
Lecture 10	Questions on MOSFET Amplifier (9-15)	00:59:33

### Chapter 14 ► 555 - Timer

Lecture 01	Introduction to IC-555 Timer	00:14:06
Lecture 02	Working of IC-555 Timer	00:25:07
Lecture 03	IC-555 Timer as a MonostableMultivibrator	00:27:03
Lecture 04	IC-555 Timer as a AstableMultivibrator	00:35:33
Lecture 05	Application of IC-555 Timer	00:07:48
Lecture 06	Workbook Questions (Q1-Q4)	00:23:48

### Chapter 15 Oscillator

Lecture 01	Introduction to Oscillator	00:23:01
Lecture 02	Principle of Operation	00:20:39
Lecture 03	Wein Bridge Oscillator	00:23:39
Lecture 04	R-C Phase Shift Oscillator	00:12:12
Lecture 05	L-C Oscillator	00:08:16
Lecture 06	Question Based on Oscillator	00:54:20



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# **GENERAL APTITUDE** ELECTRONICS ENGINEERING

# Lecture Information

### Chapter 01 ► Number System

Lecture 01	Number of Zeros at the end	00:45:09
Lecture 02	Unit Digit Value	00:47:50
Lecture 03	Last Two Digits	00:30:17
Lecture 04	Concept of Remainders	00:40:09
Lecture 05	Factorisation	00:30:07
Lecture 06	Divisibility	00:43:07
Lecture 07	Important Note	00:23:09

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### Chapter 02 ► PnC & Probability

Lecture 01	Addition, Multiplication & Filling	01:16:42
Lecture 02	Basics of PnC	00:24:20
Lecture 03	Letters-Word Arrangement	00:32:51
Lecture 04	Team Formation	00:25:59
Lecture 05	Question Paperwala Question	00:13:37
Lecture 06	Number Sum	00:12:14
Lecture 07	Linear and Circular Arrangements	00:10:44
Lecture 08	Straight Lines, Triangles, Chess Board, Handshake & Gift	00:28:09

Lecture 09	Dictionary Word	00:11:27
Lecture 10	Important Concepts PnC	00:21:53
Lecture 11	Concept Builder 1 (Probability)	02:01:46
Lecture 12	Concept Builder 2 (Probability)	01:17:15
Lecture 13	Challenge Question (Probability)	00:51:46

### Chapter 03 ► TSD & Work and Time

Lecture 01	Average Speed	00:27:29
Lecture 02	Time Difference	00:42:29
Lecture 03	Relative Speed	00:52:49
Lecture 04	Challenge Questions	01:05:54
Lecture 05	Boats & Streams	00:18:56
Lecture 06	Linear Races	00:21:37
Lecture 07	Challenge Questions	00:12:01
Lecture 08	Circular Races & HCF-LCM	01:35:08
Lecture 09	Work & Time	00:14:55
Lecture 10	Understanding Workdone	01:16:39
Lecture 11	Distribution of Wages	00:09:14
Lecture 12	Pipes & Cisterns	00:32:16
Lecture 13	W=DMTE	00:38:58

## Chapter 04 > Percentage & Its Applications

Lecture 01	Percentage : DI (Pie Chart)	01:38:34
Lecture 02	Percentage : DI (Table & Line Graph)	00:49:11
Lecture 03	Percentage Basic	01:07:11
Lecture 04	Profit & Loss	00:33:26
Lecture 05	Mixture Alligation	01:20:55
Lecture 06	SICI & Some more Graphs	01:38:16

### Chapter 05 ► Miscellaneous

Lecture 01	Logarithms	01:20:25
Lecture 02	Odd One Out, Coding, Decoding, Missing Letter & Blood	00:31:29
Lecture 03	Simplification, Some More Graphs & Reasoning	03:33:52

### Chapter 06 ► Verbal

Lecture 01	Logical Connective	01:05:55
Lecture 02	Syllogism	01:33:15
Lecture 03	Verbal Reasoning (Critical Reasoning)	01:43:06

### Chapter 07 ► Verbal Ability and Verbal Grammar (VA/VG)

Lecture 01

Verbal Ability and Verbal Grammar (VA/VG)

02:22:20

### Chapter 08 > Vocabulary Development (Rapid Fire)

Lecture 01	Rapid Fire (1)	00:27:28
Lecture 02	Rapid Fire (2)	00:14:19
Lecture 03	Rapid Fire (3)	00:11:39



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# **COMMUNICATION SYSTEM** ELECTRONICS ENGINEERING

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# Lecture Information

### Module 1 > Analog Communication

Lecture 01	Introduction to the Course	00:22:41
Lecture 02	Introduction to Communications	00:10:41
Lecture 03	Modulation & Needs of Modulation	00:52:25
Lecture 04	Question based on Modulation (1-2)	00:36:42
Lecture 05	Amplitude Modulation	00:30:15
Lecture 06	Time Domain Waveform of AM	00:31:05
Lecture 07	Frequency Domain representation of AM & Bandwidth	00:22:25
Lecture 08	Types of AM	00:12:28
Lecture 09	Power Calculation & Saving in AM	00:40:12
Lecture 10	Bandwidth & Power Requirement of Multi-tone	00:30:33
Lecture 11	Workbook Questions (3-14)	00:46:40
Lecture 12	Workbook Questions (15-23)	00:38:26
Lecture 13	Workbook Questions (24-27)	00:46:12
Lecture 14	Generation of AM	01:09:24
Lecture 15	Workbook Questions (28-30)	00:43:00
Lecture 16	Detection of AM	01:01:04
Lecture 17	Workbook Question (31-34)	00:20:23
Lecture 18	Generation of DSB-SC	00:44:07

Lecture 19	Detection of DSB-SC	00:17:55
Lecture 20	Hilbert Transform	00:40:08
Lecture 21	Generation & Detection of SSB-SC	00:26:36
Lecture 22	Workbook Questions (35-38)	00:21:50
Lecture 23	Complex Envelope and Workbook Questions (39-40)	00:27:03
Lecture 24	Phasor Diagram of AM	00:11:49
Lecture 25	Frequency Division Multiplexing & Workbook Questions (41-43)	00:50:13
Lecture 26	Angle Modulation	00:12:45
Lecture 27	Phase Modulation & frequency Modulation	00:28:57
Lecture 28	Workbook Questions (1-6)	00:27:20
Lecture 29	Workbook Questions (7-12)	00:41:13
Lecture 30	Relation between FM and PM	00:09:14
Lecture 31	Types of frequency Modulation (NBFM)	00:22:35
Lecture 32	Types of frequency Modulation (WBFM)	00:37:27
Lecture 33	Power Calculation & Transmission Efficiency	00:14:34
Lecture 34	Workbook Questions (13-18)	00:24:36
Lecture 35	Workbook Questions (19-25)	00:25:25
Lecture 36	Generation of FM	00:44:49
Lecture 37	Workbook Questions (27-28)	00:11:30
Lecture 38	Demodulation of FM	00:40:23
Lecture 39	Superhetrodyne Receiver	00:38:06
Lecture 40	Workbook Questions (1-6)	00:21:32
Lecture 41	Noise in Analog Communication	00:35:12
Lecture 42	Noise in Amplitude Modulation (DSB-FC)	00:31:41
Lecture 43	Noise in Amplitude Modulation (DSB-SC)	00:29:56
Lecture 44	Noise in Amplitude Modulation (SSB-SC)	00:14:22
Lecture 45	Noise in Angle Modulation (FM)	00:44:14
Lecture 46	Noise in Angle Modulation (PM)	00:15:20
Lecture 47	Noise and Equivalent noise temperature	00:45:19
Lecture 48	Workbook Questions (1-15)	00:35:03
Lecture 49	Quick Revision of Analog Communication	00:46:26

## Module 2 Random Variable and Random Process

Lecture 01	Concept of Random Variable	00:27:09
Lecture 02	Analysis Of Random Variable(CDF)	00:29:56
Lecture 03	Analysis of Random Variables(PDF)	00:26:32
Lecture 04	Characteristics Parameter of Random Variable	00:19:41
Lecture 05	Special Random Variable(Part 1)	00:33:43
Lecture 06	Special Random Variable(Part 2)	00:31:52
Lecture 07	Analysis of Error & Q function	00:26:48

Lecture 08	Special Random Variable (Part 3)	00:24:36
Lecture 09	Transformation of Random Variable(Part 1)	00:27:26
Lecture 10	Transformation of Random Variable(Part 2)	00:27:26
Lecture 11	Workbook Questions (1-13)	01:03:07
Lecture 12	Workbook Questions (14-18)	00:41:40
Lecture 13	Central Limit Theorem	00:10:20
Lecture 14	Joint Random Variable	00:22:29
Lecture 15	Workbook Questions(19-24)	00:32:36
Lecture 16	Random Process	00:40:05
Lecture 17	Workbook Questions(25-31)	00:33:42
Lecture 18	Workbook Questions(32-36)	00:40:05
Lecture 19	Workbook Questions(37-40)	00:44:54
Lecture 20	Workbook Questions(43-44)	00:22:50
Lecture 21	Workbook Questions(41-42)	00:34:48
Lecture 22	Quick Revision of Random Variable and Random Process	00:45:43

# Module 3 > Digital Communication

Lecture 01	Block Diagram of Digital Communication and PCM	00:36:19
Lecture 02	Sampling (Part 1)	00:46:25
Lecture 03	Sampling (Part 2)	00:34:22
Lecture 04	Types of Sampling	01:14:31
Lecture 05	Examples on Sampling	00:55:11
Lecture 06	Workbook Question(1-7)	00:34:38
Lecture 07	Workbook Question(8-9)	00:37:57
Lecture 08	Sampling of Bandpass Signal & Workbook Questions(10-11)	00:15:48
Lecture 09	Quantization	00:37:52
Lecture 10	Signal to Quantization Noise Ratio in PCM	00:20:35
Lecture 11	Non Uniform Quantization (Companding)	00:30:06
Lecture 12	Intersymbol Interference	00:42:39
Lecture 13	Workbook Questions (12-20)	00:33:29
Lecture 14	Workbook Questions (21-31)	00:58:00
Lecture 15	Differential Pulse Code Modulation (DPCM)	00:31:40
Lecture 16	Delta Modulation	00:39:39
Lecture 17	Signal to Quantization Noise Ratio in Delta Modulation	00:18:06
Lecture 18	Workbook Questions(32-36)	00:20:58
Lecture 19	Time Division Multiplexing	00:29:32
Lecture 20	Workbook Question (37-40)	00:21:43
Lecture 21	Introduction to Bandpass Transmission	00:15:13
Lecture 22	Binary Amplitude Shift Keying	00:49:38

Lecture 23	Binary Phase Shift Keying	00:28:21
Lecture 24	Differential Phase Shift Keying	00:34:53
Lecture 25	M-ary PSK	00:09:25
Lecture 26	Binary Frequency Shift Keying(Part 1)	00:23:03
Lecture 27	BFSK (Part 2) & M–ary FSK	00:46:49
Lecture 28	Workbook Question(1-7)	00:24:50
Lecture 29	Workbook Questions (8-13)	00:32:08
Lecture 30	Baseband Receiver(Noise in DC)	00:43:44
Lecture 31	Probability of Error in Baseband Receiver	00:41:23
Lecture 32	Matched Filter	00:27:40
Lecture 33	Workbook Questions (1-5)	00:34:58
Lecture 34	Workbook Questions (6-9)	00:35:29
Lecture 35	Optimum Threshold	00:34:59
Lecture 36	Optimum Threshold for Gaussian Noise	00:18:58
Lecture 37	Probability of Error in Bandpass Transmission	00:41:42
Lecture 38	Workbook Questions (10-14)	00:28:33
Lecture 39	Workbook Questions (15-17)	00:33:18
Lecture 40	Workbook Questions (18-20)	00:43:12
Lecture 41	Workbook Questions (21-23)	00:29:17
Lecture 42	Introduction to Information Theory & Entropy	00:27:00
Lecture 43	Workbook Questions (1-5)	00:42:58
Lecture 44	Representation of DMC & Special Channels	00:17:40
Lecture 45	Conditional Entropy & Mutual Information	00:34:24
Lecture 46	Workbook Questions (6-11)	00:15:24
Lecture 47	Channel Capacity of BSC and BEC	00:16:35
Lecture 48	Error Probability in Repetition of BSC & Workbook Ques	00:28:09
Lecture 49	Source Encoder	00:05:41
Lecture 50	Shannon Channel Capacity	00:05:41
Lecture 51	Workbook Questions(16-24)	00:35:39
Lecture 52	Linear Block Code	00:26:18
Lecture 53	MAP & ML Decoding	00:48:34
Lecture 54	Quick Revision of Digital Communication	00:36:59



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# **CONTROL SYSTEM** ELECTRONICS ENGINEERING

# Lecture Information

Lecture 0.0	Syllabus of Control System	00:10:00
Lecture 0.1	How to Study Control System ?	00:09:20

### Chapter 01 > Basics of Control System

Lecture 01	Concept of Open & Closed System	00:16:57
Lecture 02	Representation of Closed System	00:20:35
Lecture 03	Concept of Open Loop Transfer function (OLTF)	00:14:35
Lecture 04	Sensitivity	00:20:57
Lecture 05	Workbook Question (Q1&Q2)	00:07:00
Lecture 06	Workbook Question (Q3&Q4)	00:08:27
Lecture 07	Laplace Transform of Some Basic Signals	00:34:34
Lecture 08	Concept of Poles & Zeros	00:14:43
Lecture 09	Significance of Poles	00:31:20
Lecture 10	Stability in negative and positive feedback system	00:16:14
Lecture 11	Concept of Dominant Pole	00:32:47
Lecture 12	Workbook Question (Q5)	00:10:28
Lecture 13	Transfer Function	00:23:27
Lecture 14	Concept of Impulse and step response	00:23:20
Lecture 15	Initial and final value theorem	00:20:12

Lecture 16	Workbook Question (Q6-Q7)	00:14:53
Lecture 17	Workbook Question (Q8–Q9)	00:16:23
Lecture 18	Workbook Question (Q10-Q11)	00:15:40
Lecture 19	Workbook Question (Q12)	00:13:01

### Chapter 02 Block Diagram & Signal Flow Graph

Lecture 01	Block diagram reduction rules	00:33:47
Lecture 02	Example 1 based on Block diagram reduction rules	00:08:26
Lecture 03	Workbook Question (Q1)	00:07:44
Lecture 04	Example 2 based on Block diagram reduction rules	00:9:08
Lecture 05	Example 3 based on Block diagram reduction rules	00:16:09
Lecture 06	Workbook Question (Q2)	00:04:40
Lecture 07	Workbook Question (Q3)	00:12:16
Lecture 08	Workbook Question (Q4)	00:07:31
Lecture 09	Introduction of Signal Flow Graph	00:24:42
Lecture 10	Example 1 based on SFG	00:10:10
Lecture 11	Example 2 based on SFG	00:09:16
Lecture 12	Example 3 based on SFG	00:16:16
Lecture 13	Workbook Question (Q5)	00:10:14
Lecture 14	Workbook Question (Q6)	00:06:45
Lecture 15	Workbook Question (Q7)	00:09:48
Lecture 16	Workbook Question (Q8)	00:08:10
Lecture 17	Example 4 based on SFG	00:17:56
Lecture 18	Example 5 based on SFG	00:13:44
Lecture 19	Workbook Question (Q9)	00:12:59
Lecture 20	Limitation of Mason's Gain Formula	00:31:41

### Chapter 03 > Time Response Analysis

Lecture 01	Analysis of first order system	00:38:04
Lecture 02	Introduction of 2nd order system	00:16:57
Lecture 03	Unit impulse response of 2nd order system (Part-1)	00:40:04
Lecture 04	Unit impulse response of 2nd order system (Part-2)	00:25:26
Lecture 05	Unit impulse response of 2nd order system (Part-3)	00:23:36
Lecture 06	Concept of Damping in series RLC Circuit	00:34:39
Lecture 07	Concept of Damping in parallel RLC Circuit	00:18:32
Lecture 08	Step Response of 2nd order system (Part-1)	00:25:52
Lecture 09	Step Response of 2nd order system (Part-2)	00:24:38
Lecture 10	Question based on 2nd order system	00:25:13
Lecture 11	Workbook Question (Q1)	00:07:45

Lecture 12	Workbook Question (Q2)	00:07:56
Lecture 13	Workbook Question (Q3)	00:10:52
Lecture 14	Workbook Question (Q4-Q5)	00:12:38
Lecture 15	Workbook Question (Q6)	00:17:47
Lecture 16	Challenging Questions based on 3rd order system	00:13:50
Lecture 17	Time Domain parameters of 1st order system	00:32:10
Lecture 18	Time Domain parameters of 2nd order system (Part-1)	00:29:42
Lecture 19	Time Domain parameters of 2nd order system (Part-2)	00:34:39
Lecture 20	Time Domain parameters of 2nd order system (Part-3)	00:27:13
Lecture 21	Workbook Question (Q7)	00:09:48
Lecture 22	Workbook Question (Q8–Q9)	00:19:03
Lecture 23	Question Based on time domain parameter of 2nd	00:20:57
Lecture 24	Workbook Question (Assignment 4)	00:14:44
Lecture 25	Analysis of time domain parameters corresponding to	00:33:16
Lecture 26	Steady-state error for unity feedback system (Part-1)	00:21:40
Lecture 27	Steady-state error for unity feedback system (Part-2)	00:29:23
Lecture 28	Workbook Questions based on steady state error (Q10-Q11)	00:12:32
Lecture 29	Workbook Questions based on steady state error (Q12)	00:13:26
Lecture 30	Workbook Questions based on steady state error (Q13)	00:08:18
Lecture 31	Workbook Questions based on steady state error (Q14)	00:07:55
Lecture 32	Workbook Questions based on steady state error (Q15)	00:10:40
Lecture 33	Steady state error for non-unity feedback system	00:17:03
Lecture 34	Question based on Steady state error for non-unity	00:19:43
Lecture 35	Question based on Steady state error for non-unity	00:09:46
Lecture 36	Workbook Questions (Q18-Q19)	00:16:11

# Chapter 04 Routh–Hurwitz Stability

Lecture 01	Introduction of Routh Hurwitz Stability Criterion (Part-1)	00:28:03
Lecture 02	Introduction of Routh Hurwitz Stability Criterion (Part-2)	00:14:18
Lecture 03	Introduction of Routh Hurwitz Stability Criterion (Part-3)	00:26:05
Lecture 04	Example based on Routh Hurwitz Stability Criterion (Ex 4)	00:09:38
Lecture 05	Example based on Routh Hurwitz Stability Criterion (Ex 5)	00:19:18
Lecture 06	Special Case based on RH table (Part-1)	00:07:46
Lecture 07	Special Case based on RH table (Part-2)	00:07:01
Lecture 08	Workbook Question (Q1-Q2)	00:14:55
Lecture 09	Workbook Question (Q3)	00:10:59
Lecture 10	Workbook Question (Q4-Q5)	00:18:25
Lecture 11	Workbook Question (Q6-Q7)	00:18:58
Lecture 12	Workbook Question (Q8–Q9)	00:13:12
Lecture 13	Workbook Question (Q10)	00:11:31

Lecture 14	Important Concept (Part-1)	00:21:16
Lecture 15	Important Concept (Part-2)	00:13:00
Lecture 16	Important Concept (Part-3)	00:10:39
Lecture 17	Workbook Question (Q11)	00:08:50

# Chapter 05 Root Locus Diagram

Lecture 01	Introduction of Root Locus	00:42:26
Lecture 02	Rules for Sketching Root Locus (Part-1)	00:45:23
Lecture 03	Rules for Sketching Root Locus (Part-2)	00:22:45
Lecture 04	Workbook Question (Q1)	00:15:05
Lecture 05	Workbook Question (Q2-Q3)	00:10:15
Lecture 06	Rules for Sketching Root Locus (Part-3)	00:29:44
Lecture 07	Rules for Sketching Root Locus (Part-4)	00:19:07
Lecture 08	Question Based on Root Locus (Part-1)	00:27:08
Lecture 09	Question Based on Root Locus (Part-2)	00:24:39
Lecture 10	Question Based on Root Locus (Part-3)	00:17:47
Lecture 11	Question Based on Root Locus (Part-4)	00:29:26
Lecture 12	Question Based on Root Locus (Part-5)	00:19:53
Lecture 13	Question Based on Root Locus (Part-6)	00:22:23
Lecture 14	Workbook Question (Q4-Q5)	00:15:36
Lecture 15	Workbook Question (Q6)	00:13:36
Lecture 16	Workbook Question (Q7)	00:23:41
Lecture 17	Question Based on Root Locus (Part-7)	00:19:24
Lecture 18	Angle of Departure and Arrival	00:32:56
Lecture 19	Workbook Question (Q8)	00:15:35
Lecture 20	Question Based on Root Locus (Part-8)	00:13:25
Lecture 21	Concept of Complementary Root Locus (Part-1)	00:31:49
Lecture 22	Concept of Complementary Root Locus (Part-2)	00:22:09
Lecture 23	Question Based on Complementary Root Locus	00:19:28
Lecture 24	Workbook Question (Q9)	00:07:54
Lecture 25	Question Based on Root Locus (Part-9)	00:25:57
Lecture 26	Workbook Question (Q10)	00:22:34
Lecture 27	Workbook Question (Q11)	00:14:08
Lecture 28	Workbook Question (Q12–Q14)	00:17:21
Lecture 29	Effect of addition of poles & zeros on Root Locus	00:11:08
Lecture 30	Question based on Effect of addition of poles on Root Locus	00:30:15
Lecture 31	Workbook Question (Q15)	00:10:09

# Chapter 06 ► Polar Plot

Lecture 01	Introduction Polar Plot	00:23:35
Lecture 02	Polar plot for type '0'system	00:35:52
Lecture 03	Polar plot for type '1' system	00:15:06
Lecture 04	Polar plot for higher order system	00:09:05
Lecture 05	Good example of polar plot	00:19:57
Lecture 06	Workbook Questions (Q1-Q2)	00:17:13
Lecture 07	Relative Stability Parameter (Part-1)	00:37:37
Lecture 08	Relative Stability Parameter (Part-2)	00:16:22
Lecture 09	Relative Stability Parameter (Part-3)	00:23:05
Lecture 10	Relative Stability Parameter (Part-4)	00:12:42
Lecture 11	Workbook Question (Q3-Q4)	00:15:36
Lecture 12	Workbook Question (Q5-Q6)	00:09:40
Lecture 13	Good Example Based on Relative Stability Parameter	00:53:34
Lecture 14	Calculation of Gain Margin by using Root Locus	00:11:58
Lecture 15	Good concept of critical point $(-1 + j0)$	00:12:05
Lecture 16	Graphical calculation of Phase Margin	00:18:26
Lecture 17	Questions based on relative stability parameter	00:12:31
Lecture 18	Workbook Question (Q7–Q8)	00:27:55
Lecture 19	Good question on polar plot	00:24:32
Lecture 20	Polar plot of transportation delay system	00:25:39
Lecture 21	Workbook Question (Q9–Q10)	00:17:37
Lecture 22	Workbook Question (Q11)	00:09:25
Lecture 23	Good Concept of Polar plot (Part-1)	00:34:54
Lecture 24	Good Concept of Polar plot (Part-2)	00:59:25

# Chapter 07 > Nyquist Stability Criterion

Introduction of Nyquist plot	00:17:31
Nyquist Contour	00:24:43
Story of Nyquist Plot	01:05:33
Questions based on Nyquist plot (part-1)	00:30:32
Questions based on Nyquist plot (part-2)	00:22:37
Questions based on Nyquist plot (part-3)	00:11:33
Questions based on Nyquist plot (part-4)	00:12:31
Workbook Question (Q1-Q2)	00:17:37
Workbook Question (Q3-Q4)	00:26:30
Workbook Question (Q5-Q6)	00:26:31
Workbook Question (Q7)	00:21:00
Workbook Question (Q8)	00:13:48
	Introduction of Nyquist plot Nyquist Contour Story of Nyquist Plot Questions based on Nyquist plot (part-1) Questions based on Nyquist plot (part-2) Questions based on Nyquist plot (part-3) Questions based on Nyquist plot (part-4) Workbook Question (Q1-Q2) Workbook Question (Q3-Q4) Workbook Question (Q5-Q6) Workbook Question (Q7) Workbook Question (Q8)

Lecture 13	Workbook Question (Q9)	00:17:28
Lecture 14	Workbook Question (Q10-Q11)	00:28:15
Lecture 15	Workbook Question (Q12)	00:15:44
Lecture 16	Relative stability parameters for positive feedback system	00:06:58

# Chapter 08 > Bode Plot

Introduction of Bode Plot	00:29:20
Question Based on Bode Plot (Part-1)	00:25:57
Question Based on Bode Plot (Part-2)	00:11:08
Question Based on Bode Plot (Part-3)	00:10:48
Question Based on Bode Plot (Part-4)	00:32:09
Bode Plot for First Order System (Part-1)	00:37:24
Bode Plot for First Order System (Part-2)	00:16:23
Recovery of Transfer Function from Bode Part-1)	00:18:25
Recovery of Transfer Function from Bode Part-2)	00:26:18
Workbook Question (Q1-Q2)	00:16:16
Workbook Question (Q3-Q4)	00:13:25
Workbook Question (Q5)	00:14:33
Workbook Question (Q6)	00:13:21
Workbook Question (Q7)	00:13:48
Workbook Question (Q8)	00:17:16
Workbook Question (Q9)	00:14:58
Workbook Question (Q10)	00:21:14
Calculation of Error Co-efficient from Bode Plot	00:16:56
Workbook Question (Q11)	00:15:41
Workbook Question (Q12)	00:13:07
Relative Stability Parameter from Bode Plot	00:18:22
Bode Plot for Standard 2nd Order System	00:34:09
Workbook Question (Q13)	00:17:53
Asymptotic Bode Phase Plot	00:51:27
	Introduction of Bode Plot Question Based on Bode Plot (Part-1) Question Based on Bode Plot (Part-2) Question Based on Bode Plot (Part-3) Question Based on Bode Plot (Part-4) Bode Plot for First Order System (Part-1) Bode Plot for First Order System (Part-2) Recovery of Transfer Function from Bode Part-1) Recovery of Transfer Function from Bode Part-2) Workbook Question (Q1-Q2) Workbook Question (Q3-Q4) Workbook Question (Q3) Workbook Question (Q5) Workbook Question (Q6) Workbook Question (Q7) Workbook Question (Q9) Workbook Question (Q10) Calculation of Error Co-efficient from Bode Plot Workbook Question (Q11) Workbook Question (Q12) Relative Stability Parameter from Bode Plot Bode Plot for Standard 2nd Order System Workbook Question (Q13) Asymptotic Bode Phase Plot

### Chapter 09 Frequency Response of Second Order System

Lecture 01	Frequency Response of Standard 2nd Order System	00:23:44
Lecture 02	Workbook Question (Q1)	00:11:49
Lecture 03	Workbook Question (Q2–Q3)	00:06:40
Lecture 04	Workbook Question (Q4)	00:08:43
Lecture 05	Workbook Question (Q5)	00:09:17
Lecture 06	3db frequency of Standard 2nd Order System	00:24:03
Lecture 07	Relative Stability Parameter of Standard 2nd Order System	00:16:00

# Chapter 10 > State Space Analysis

Lecture 01	Introduction of State Space Analysis	00:42:04
Lecture 02	Example Based on State Variable Representation (Part-1)	00:27:01
Lecture 03	Example Based on State Variable Representation (Part-2)	00:21:16
Lecture 04	Example Based on State Variable Representation (Part-3)	00:19:30
Lecture 05	Recovery of Transfer Function from State Vari(Part-1)	00:19:19
Lecture 06	Recovery of Transfer Function from State Vari(Part-2)	00:42:04
Lecture 07	Workbook Question (Q1)	00:15:34
Lecture 08	Workbook Question (Q2-Q3)	00:08:43
Lecture 09	Workbook Question (Q4-Q5)	00:15:29
Lecture 10	Workbook Question (Q6)	00:16:11
Lecture 11	Good Concept of State Variable Representation	00:13:52
Lecture 12	Solution of State Space Equation (Part-1)	00:21:54
Lecture 13	Solution of State Space Equation (Part-2)	00:11:44
Lecture 14	Workbook Question (Q7–Q8)	00:13:09
Lecture 15	Workbook Question (Q9)	00:17:36
Lecture 16	Workbook Question (Q10)	00:11:31
Lecture 17	Workbook Question (Q11-Q12)	00:20:18
Lecture 18	Workbook Question (Q13)	00:20:15
Lecture 19	Workbook Question (Q14-Q15)	00:21:15
Lecture 20	Concept of Controllability and Observability	00:22:18
Lecture 21	Question Based on Controllability and Observability (Part-1)	00:11:26
Lecture 22	Question Based on Controllability and Observability (Part-2)	00:20:30
Lecture 23	Transfer Function Decomposition (Part-1)	00:16:19
Lecture 24	Transfer Function Decomposition (Part-2)	00:39:53
Lecture 25	Workbook Question (Q16)	00:14:30
Lecture 26	Workbook Question (Q17)	00:20:07
	State Variable Representation of Electrical Network	PDF

# Chapter 11 > Controllers & Compensators

Lecture 01	Introduction of Compensator and Controller	00:13:08
Lecture 02	Lag Compensator	00:32:21
Lecture 03	Lead Compensator	00:27:00
Lecture 04	Lag-Lead Compensator	00:22:46
Lecture 05	Lead-Lag Compensator	00:24:42
Lecture 06	Workbook Question (Q1–Q3)	00:15:38
Lecture 07	Workbook Question (Q4)	00:13:55
Lecture 08	Workbook Question (Q5)	00:08:13
Lecture 09	On-Off Controller	00:04:17

Lecture 10	Proportional Controller	00:35:25
Lecture 11	Derivative Controller	00:10:31
Lecture 12	Proportional Derivative Controller	00:24:39
Lecture 13	Integral Controller	00:09:45
Lecture 14	PI Controller	00:10:45
Lecture 15	PID Controller	00:08:04
Lecture 16	Workbook Question (Q6)	00:25:00
Lecture 17	Workbook Question (Q7)	00:25:40
Lecture 18	Workbook Question (Q8)	00:09:13
_	Comparison Between Phase Lag Compensator &	PDF



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# **DIGITAL ELECTRONICS** ELECTRONICS ENGINEERING

# Lecture Information

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011

0100

Lecture 00 How to Study Digital Electronics & Microprocessor 8085 ?	00:24:20
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### Chapter 01 ► Logic Gates

Lecture 01	Basic gates-AND, OR & NOT 00	
Lecture 02	Universal gates-NAND	00:35:40
Lecture 03	Designing using Minimum number of NAND gates	00:29:23
Lecture 04	Universal gates-NOR	00:20:40
Lecture 05	Designing using Minimum number of NOR gates	00:15:16
Lecture 06	Workbook Questions 1-5	00:17:11
Lecture 07	Switching Circuit Representation-basic & universal gates	00:19:11
Lecture 08	Special Purpose Gates-XOR	00:29:36
Lecture 09	Special Purpose Gates-XNOR	00:36:37
Lecture 10	Workbook Questions 6-12	00:32:14
Lecture 11	Switching Circuit Representation-Special Purpose Gates	00:12:17
Lecture 12	Workbook Questions 13-14	00:21:05
Lecture 13	Special Case in minimum number of NAND & NOR gates	00:11:46
Lecture 14	Workbook Questions 15-16	00:08:28
Lecture 15	Workbook Questions 17-19 Based on Propagation Delay	00:17:23
Lecture 16	Ring Oscillator & Workbook Questions 20-21	00:19:31

### Chapter 02 ► Boolean Algebra

Lecture 01	Laws of Boolean Algebra	00:11:58
Lecture 02	Conensus Law	00:20:17
Lecture 03	Associative Law, DeMorgan's Law & Duality	00:32:31
Lecture 04	Maximum Number of Boolean Functions	00:19:35
Lecture 05	Workbook Questions 1-6	00:17:10
Lecture 06	Workbook Questions 7-12	00:22:42
Lecture 07	Representation of Boolean Function-SOP & POS	00:22:17
Lecture 08	Standard/Canconical SOP & POS form (Part 1)	00:26:19
Lecture 09	Standard/Canconical SOP & POS form (Part 2)	00:30:44
Lecture 10	Standard/Canconical SOP & POS form (Part 3)	00:15:12
Lecture 11	Workbook Questions 13-23	00:30:45
Lecture 12	Minterms through Logic gates & workbook questions 24-26	00:20:52

### Chapter 03 ► K-Maps

Lecture 01	Two variable K-Maps	00:27:22
Lecture 02	Three variable K-Maps	00:38:02
Lecture 03	Four variable K-Maps	00:35:16
Lecture 04	Workbook Questions 1-6	00:36:20
Lecture 05	Workbook Questions 7-12	00:34:30
Lecture 06	Concept of Don't Care	00:15:48
Lecture 07	Workbook Questions 13-17	00:16:07
Lecture 08	Workbook Questions 18-21	00:29:31
Lecture 09	Workbook Questions 22-25	00:27:32
Lecture 10	Five variable K-Maps & Workbook Question 26	00:12:20
Lecture 11	Prime Implicants & Essential Prime Implicants	00:38:18
Lecture 12	Workbook Questions 27-33	00:34:34

### Chapter 04 > Number System, Binary Codes & Complement Form

Lecture 01	Number System & Conversion (Part 1)	
Lecture 02	Number System & Conversion (Part 2)	00:29:29
Lecture 03	Workbook Questions 1-11	00:39:22
Lecture 04	BCD Codes	00:25:21
Lecture 05	Workbook Questions 12-14	00:05:17
Lecture 06	Gray Code	00:17:28
Lecture 07	Sign Magnitude & 2's complement representation (Part 1)	00:21:20
Lecture 08	Sign Magnitude & 2's complement representation (Part 2)	00:22:09

Lecture 09	Workbook Questions 1-3	00:31:22
Lecture 10	Workbook Questions 4-8	00:22:52
Lecture 11	Shortcut to find 2's	00:11:51
Lecture 12	1's & 2's Complement's Arithmetic	00:30:05
Lecture 13	Concept of Overflow	00:28:21
Lecture 14	Workbook Questions 9-11	00:09:07

# Chapter 05 Combinational Circuits

Lecture 01	Introduction to Combinational Circuits & 2:1 Multiplexer	00:17:34
Lecture 02	4:1 Multiplexer & 8:1 Multiplexer	00:24:59
Lecture 03	Procedure to find output of Multiplexer	00:14:21
Lecture 04	Workbook Questions 1–6	00:27:49
Lecture 05	Workbook Questions 7-11	00:21:17
Lecture 06	Workbook Questions 12-15	00:18:00
Lecture 07	MUX with enable input	00:21:45
Lecture 08	Workbook Questions 16-17	00:12:11
Lecture 09	Designing of 2:1 Multiplexer	00:20:45
Lecture 10	Designing of 4:1 Multiplexer	00:29:40
Lecture 11	Designing of 8:1 Multiplexer	00:20:16
Lecture 12	Designing any function using Minimum Number on MUX	00:22:43
Lecture 13	Workbook Questions 18-21	00:26:08
Lecture 14	Workbook Questions 22-25	00:16:31
Lecture 15	Designing of Higher Order MUX using Lower Order MUX Part $1$	00:24:43
Lecture 16	Designing of Higher Order MUX using Lower Order MUX Part 2	00:22:27
Lecture 17	Demultiplexer	00:26:23
Lecture 18	Decoder Part 1	00:39:00
Lecture 19	Decoder Part 2	00:35:24
Lecture 20	Designing of Higher Order Decoder using Lower Order	00:32:24
Lecture 21	Workbook Question 1-4 (Decoder)	00:34:25
Lecture 22	Encoder	00:30:15
Lecture 23	Priority Encoder	00:25:42
Lecture 24	Half Adder & Full Adder	00:34:33
Lecture 25	Half Subtrator & Full Subtrator	00:34:31
Lecture 26	Workbook Questions 1-3 (Adder & Subtrator)	00:13:16
Lecture 27	Binary Parallel Adder	00:26:12
Lecture 28	Workbook Questions 4–6 (Adder & Subtrator)	00:22:42
Lecture 29	Workbook Question 7-8 (Adder & Subtrator)	00:32:37
Lecture 30	Comparator	00:32:16
Lecture 31	Workbook Questions 1-2 (Comparator)	00:23:48

Lecture 32	4-bit Comparator	00:19:08
Lecture 33	Code Converter Part 1	00:17:53
Lecture 34	Code Converter Part 2	00:39:23
Lecture 35	Programmable Logic Devices	00:29:45
Lecture 36	Workbook Question 1-3 (PLDs)	00:04:25
Lecture 37	Workbook Question 1-4 (Code Converter)	00:38:06

# Chapter 06 ► Sequential Circuits

Lecture 01	Sequential Circuits & Memory Element	00:22:16
Lecture 02	SR Latch using NOR gate	00:23:38
Lecture 03	SR Latch using NAND gate	00:22:13
Lecture 04	Equivalence of SR Latch using NOR gate & SR Latch	00:19:39
Lecture 05	Introduction to Flip-Flop	00:18:43
Lecture 06	SR Flip-Flop using NOR Latch	00:11:59
Lecture 07	Equivalence of SR Flip-Flop using NOR Latch & SR Flip-Flop	00:13:14
Lecture 08	SR Flip-Flop using NAND Latch	00:14:22
Lecture 09	Characteristics Table, Characteristics Equation and Excitation	00:25:43
Lecture 10	D Flip-Flop (NOR Latch & NAND Latch)	00:23:56
Lecture 11	JK Flip-Flop using NOR Latch	00:32:57
Lecture 12	JK Flip-Flop using NAND Latch	00:22:37
Lecture 13	Characteristics Table, Characteristics Equation and Excitation	00:15:16
Lecture 14	T Flip-Flop (NOR Latch & NAND Latch)	00:11:31
Lecture 15	Quick Revision of Latch & Flip-Flop	00:31:33
Lecture 16	Workbook Questions (1-5)	00:14:30
Lecture 17	Workbook Questions (6-9)	00:24:29
Lecture 18	Flip-Flop Conversion	00:32:42
Lecture 19	Workbook Questions (10-14)	00:41:51
Lecture 20	Designing of Synchronous Counter from Next State Equation	00:35:03
Lecture 21	Designing of Synchronous Counter from State Table	00:29:34
Lecture 22	Workbook Question 1-3	00:23:29
Lecture 23	Analysis of Synchronous Counter (State Table or State	00:14:38
Lecture 24	Workbook Questions 4-6	00:26:23
Lecture 25	Workbook Questions 7-10	00:36:30
Lecture 26	Workbook Questions 11-13	00:29:46
Lecture 27	Workbook Questions 14-17	00:24:29
Lecture 28	External Input in Counter and UP/DOWN Counter	00:37:29
Lecture 29	Alternative approach to Analyse Synchronous Counter	00:11:58
Lecture 30	Alternative Solutions to Workbook Questions 4-9	00:24:08
Lecture 31	Alternative Solutions to Workbook Questions 10-17	00:24:34

Lecture 32	Workbook Question 18	00:35:44
Lecture 33	Workbook Question 19-20	00:27:20
Lecture 34	Workbook Question 21	00:27:08
Lecture 35	Workbook Question 22-24	00:38:11
Lecture 36	Edge Trigged and level trigged Flip-Flops	00:36:32
Lecture 37	Concept of Asynchronous Counter	00:18:47
Lecture 38	MOD 8 or divide by 8 Asynchronous Counter	00:32:38
Lecture 39	Designing of Down Asynchronous Counter	00:29:45
Lecture 40	MOD-N Asynchronous Counter	00:11:41
Lecture 41	Asynchronous Clear and Preset Input	00:36:58
Lecture 42	Analysis of MOD-N Asynchronous Counter (Part 1)	00:37:35
Lecture 43	Analysis of MOD-N Asynchronous Counter (Part 2)	00:21:02
Lecture 44	Designing of MOD-N Asynchronous UP Counter	00:31:50
Lecture 45	Designing of MOD-N Asynchronous DOWN Counter	00:23:33
Lecture 46	Shortcut for Designing & Analysis of MOD-N Asynchronous	00:21:10
Lecture 47	Comparison on Asynchronous Counter & Synchronous	00:24:03
Lecture 48	Workbook Question 1–6	00:38:37
Lecture 49	Workbook Question 7-10	00:33:22
Lecture 50	Concept of Frequency Division in MOD-N Asynchronous	00:15:22
Lecture 51	Workbook Question 10-11	00:12:40
Lecture 52	Synchronous Clear and Preset Input	00:12:36
Lecture 53	Workbook Question 12-13	00:11:17
Lecture 54	Workbook Miscellaneous Questions (FF and Counters) 1-3	00:22:32
Lecture 55	Workbook Miscellaneous Questions (FF and Counters) 4-6	00:20:17
Lecture 56	Workbook Miscellaneous Questions (FF and Counters) 7-9	00:41:18
Lecture 57	Workbook Miscellaneous Questions (FF and Counters) 10-12	00:29:48
Lecture 58	Workbook Miscellaneous Questions (FF and Counters) 13	00:10:15
Lecture 59	Delay Comparison in Asynchronous Counter & Synchronous	00:36:18
Lecture 60	Workbook Miscellaneous Questions (FF and Counters) 14-16	00:07:03
Lecture 61	Self Starting Counters & Workbook Miscellaneous Question 17	00:38:16
Lecture 62	Cascading of Counters through Workbook Question 18	00:25:34
Lecture 63	Cascading of Counters through Workbook Questions 19-20	00:25:39
Lecture 64	Workbook Miscellaneous Questions (FF and Counters) 21-22	00:38:43
Lecture 65	Race Around Condition	00:21:49
Lecture 66	Master Slave Flip-Flop & Workbook Miscellaneous	00:32:35
Lecture 67	Shift Register	00:43:15
Lecture 68	Application of Shift Register	0:32:51
Lecture 69	Workbook Questions 1-4	00:23:43
Lecture 70	Workbook Questions 5–6	00:13:43
Lecture 71	Concept of Set-up Time & hold time & Workbook Question 7	00:19:49

# Chapter 07 > DAC & ADC

Lecture 01	Weighted Resistor DAC & Workbook Questions 1-5	00:44:36
Lecture 02	Parallel Comparator ADC & Workbook Questions 6-8	00:37:30
Lecture 03	Successive Approximation ADC & Workbook Questions 9	00:32:35
Lecture 04	Counter Type ADC & Workbook Questions 10	00:17:20
Lecture 05	Full Scale Voltage, Resolution & Step Size through	00:29:06
Lecture 06	Dual Slope ADC & Workbook Questions 14-15	00:47:29
Lecture 07	Workbook Questions 16-19	00:36:11
Lecture 08	Workbook Questions 20-23	00:23:37
Lecture 09	R-2R Ladder Type DAC	00:28:48
Lecture 10	Workbook Questions 24-27	00:17:06

### Chapter 08 Microprocessor 8085

Lecture 01	Introduction to Microprocessor 8085	00:44:33
Lecture 02	Data Transfer Instruction Group (Part 1)	00:39:54
Lecture 03	Data Transfer Instruction Group (Part 2)	00:39:19
Lecture 04	Arithmetic Instruction Group (Part 1)	00:34:35
Lecture 05	Arithmetic Instruction Group (Part 2)	00:37:25
Lecture 06	Arithmetic Instruction Group (Part 3)	00:15:55
Lecture 07	Logical Instruction Group	00:29:07
Lecture 08	Workbook Questions 1-11	00:33:28
Lecture 09	Workbook Questions 12-19	00:32:42
Lecture 10	Branch Group Instructions (Part 1)	00:37:34
Lecture 11	Branch Group Instructions (Part 2)	00:52:11
Lecture 12	Stack Group Instructions	00:21:26
Lecture 13	Workbook Questions 1-6	00:37:28
Lecture 14	Workbook Questions 7-15	00:37:06
Lecture 15	Workbook Questions 16-18 based on IN & OUT Instruction	00:13:14
Lecture 16	Workbook Questions 19-21 based on DAA Instruction	00:37:02
Lecture 17	T States, Machine Cycles & Instruction Cycle (Part 1)	00:18:04
Lecture 18	T States, Machine Cycles & Instruction Cycle (Part 2)	00:37:37
Lecture 19	Workbook Questions 1-9	00:25:29
Lecture 20	Workbook Questions 10-12	00:27:42
Lecture 21	Interrupts	00:22:42
Lecture 22	Workbook Questions 1-6	00:06:46
Lecture 23	Memory	00:17:32
Lecture 24	Workbook Questions 1-15	00:38:41
Lecture 25	Memory Interfacing	00:52:12

Lecture 26	Workbook Questions 16-22	00:30:33
Lecture 27	Workbook Questions 23-24	00:35:38
Lecture 28	Workbook Questions 25-29	00:17:22

### Chapter 09 ► Logic Family

Lecture 01	Logic Family – RTL & DTL with Workbook Questions 1–3	0:37:23
Lecture 02	CMOS Logic Family	0:30:38
Lecture 03	Workbook Questions 4-8	0:17:53
Lecture 04	Workbook Question 9	0:08:49

### Quick Revision >

Lecture 01	Quick Revision of Digital Electronics	(Part 1)	01:12:33
Lecture 02	Quick Revision of Digital Electronics	(Part 2)	01:20:27



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# **ELECTRONIC DEVICES** & **CIRCUITS** ELECTRONICS ENGINEERING

# Lecture Information

VOI ts

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Lecture 00

How to use PD-GD course for Electronic Devices & Circuits ? 00:15:56

### Unit 01 >

Syllabus Overview of Electronic Devices and Circuits	00:47:37
Atomic Theory	00:36:02
Formation of Energy Band Diagram	00:52:10
Silicon Crystal	00:16:04
Intrinsic Semiconductor	00:37:58
Thermal Velocity and Drift Velocity	00:41:12
Extrinsic Semiconductor	00:45:05
Mobility and Conductivity	00:07:10
Current Density	00:19:04
Electrical Neutrality of Semiconductor & Charge Density	00:58:16
Drift Current and Diffusion Current	00:37:52
Low Level Injection	01:32:15
Fermi Level	02:23:31
Hall Effect	01:53:03
Continuity Equation	00:29:33
Question of Unit 01 (Part 1)	02:17:27
Question of Unit 01 (Part 2)	02:15:12
	Syllabus Overview of Electronic Devices and CircuitsAtomic TheoryFormation of Energy Band DiagramSilicon CrystalIntrinsic SemiconductorThermal Velocity and Drift VelocityExtrinsic SemiconductorMobility and ConductivityCurrent DensityElectrical Neutrality of Semiconductor & Charge DensityDrift Current and Diffusion CurrentLow Level InjectionFermi LevelHall EffectContinuity EquationQuestion of Unit 01 (Part 1)Question of Unit 01 (Part 2)

### Unit 02 >

Lecture 2.01	Formation of PN Junction Diode	01:26:52
Lecture 2.02	PN Junction Diode under Equilibrium	01:05:23
Lecture 2.03	PN Junction Diode Under Bias	01:57:16
Lecture 2.04	Energy Band Diagram of PN Junction Diode	00:44:34
Lecture 2.05	Maximum Electric Field & Width of Junction	00:28:24
Lecture 2.06	Law of Junction	00:30:33
Lecture 2.07	Diode Current Equation and Analysis	01:46:03
Lecture 2.08	Concentration & Current Direction	00:53:59
Lecture 2.09	VI Characteristics of PN Junction Diode	00:24:59
Lecture 2.10	Load Line Analysis of Diode	00:24:26
Lecture 2.11	Operating Point	00:35:25
Lecture 2.12	Diode Resistance	00:18:51
Lecture 2.13	Transition Capacitance	00:55:17
Lecture 2.14	Diffusion Capacitance	00:24:32
Lecture 2.15	Effect of Temperature on VI Characteristics of Diode	00:29:04
Lecture 2.16	Avalanche and Zener Breakdown Mechanism	01:10:37
Lecture 2.17	Reverse Recovery Time	00:47:54
Lecture 2.18	Questions on Unit 02	03:20:51

# Unit 03 >

Lecture 3.01	Introduction of Bipolar Junction Transistor (BJT	00:38:00
Lecture 3.02	BJT under Equilibrium	00:11:17
Lecture 3.03	BJT under Biasing	00:25:36
Lecture 3.04	Current Components In BJT (PNP)	01:54:30
Lecture 3.05	Emitter injection efficiency & Base Transport Factor	00:31:21
Lecture 3.06	Early Effect	00:53:55
Lecture 3.07	Early Effect and Early Voltage	00:15:02
Lecture 3.08	Input Output Characteristics of CB & CE	01:53:35
Lecture 3.09	Cutoff Region	00:31:43
Lecture 3.10	Saturation Mode of Operation	00:22:15
Lecture 3.11	Comparison Mode of Operations	00:32:15
Lecture 3.12	Ebers-Moll Model	00:32:22
Lecture 3.13	Breakdown Mechanism in BJT	00:29:55

# Unit 04 >

Lecture 4.01	MOSFET Introduction & Comparison with BJT	00:33:40
Lecture 4.02	MOSFET Classification	00:53:45

Lecture 4.03	MOSFET Construction and Operation	03:02:23
Lecture 4.04	Derivation of Current Equation in Saturation and Triode Region	00:56:02
Lecture 4.05	Id vd Vds relationship Analysis	00:43:42
Lecture 4.06	Channel length Modulation	01:11:16
Lecture 4.07	Equivalent Circuit of MOS	00:22:18
Lecture 4.08	Comparison of NMOS and PMOS	00:44:41
Lecture 4.09	Circuit Symbol of MOS (NMOS and PMOS Enhancement type)	00:27:32
Lecture 4.10	CMOS Invertor	04:51:42
Lecture 4.11	MOS Resistance	00:15:43
Lecture 4.12	MOS Transconductance	00:49:34
Lecture 4.13	MOS CAPACITOR Introduction	00:58:13
Lecture 4.14	MOS Capacitor (Accumulation mode)	00:41:41
Lecture 4.15	MOS Capacitor (Depletion Mode)	01:00:12
Lecture 4.16	MOS Capacitor (Inverssion Mode)	00:53:39
Lecture 4.17	MOS Capacitor energy band diagram	00:58:16
Lecture 4.18	Threshold Voltage Adjustment by ion Implantation	00:31:31
Lecture 4.19	Threshold Voltage & Inversion Charge	00:55:33
Lecture 4.20	CV characteristics of MOS	00:48:19
Lecture 4.21	Non Idealities & Flat Band Voltage	01:26:03
Lecture 4.22	MOSFET Body effect	00:28:35

# Unit 05 >

Lecture 5.01	Light Emittiing Diode	00:38:50
Lecture 5.02	Direct and Indirect Bandgap Semiconductors	00:25:50
Lecture 5.03	LED structure	00:23:00
Lecture 5.04	LED Advantage and Application	00:05:45
Lecture 5.05	Solar Cell	01:07:05
Lecture 5.06	Photodiode	00:30:18

# Unit 06 ►

Lecture 6.01	What is IC Technology ?	00:08:56
Lecture 6.02	Introduction of IC Technology	00:23:15
Lecture 6.03	Comparison Between Integrated Circuit and Discrete Circuit	00:12:34
Lecture 6.04	Preparation of Wafer	00:19:03
Lecture 6.05	Wafer Fabrication Layering	00:21:41
Lecture 6.06	Wafer Fabrication Layering (Oxidation)	00:18:50
Lecture 6.07	Wafer Fabrication Layering (Deposition)	00:12:32
Lecture 6.08	Wafer Fabrication Layering (Sputtering)	00:09:11
Lecture 6.09	Wafer Fabrication (Photolithography)	00:29:36

Lecture 6.10	Wafer Fabrication (Photolithography – Photoresist)	0:18:06
Lecture 6.11	Wafer Fabrication (Etching)	0:27:24
Lecture 6.12	Wafer Fabrication (Doping)	0:25:09
Lecture 6.13	Wafer Fabrication (heat treatment)	0:07:23
Lecture 6.14	Wafer Fabrication (fabrication of NMOS)	0:18:42
Lecture 6.15	Wafer Fabrication (fabrication of CMOS)	0:17:15
Lecture 6.16	Previous Year Questions on IC Technology	0:26:48



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# ELECTROMAGNETIC THEORY ELECTRONICS ENGINEERING

# Lecture Information

### Chapter 1 > Coordinate System

Lecture 01	Cartesian Coordinate	00:26:28
Lecture 02	Cylindrical Coordinate System	00:40:06
Lecture 03	Spherical Coordinate System	00:37:39
Lecture 04	Del Operator	00:59:27
Lecture 05	Workbook Questions (Q1–Q3)	00:52:17
Lecture 06	Workbook Questions(Q4–Q8)	00:18:32

10

### Chapter 2 > Electrostatics

Coulomb's Law & Electric Field Intensity	00:48:31
Numerical Based on Coulombs Law & Electric Field Intensity	00:44:07
Charge Distribution	01:45:49
Numerical Based on Charge Distribution	00:48:56
Workbook Questions (Q9-Q12)	00:34:30
Workbook Questions(Q13-Q15)	00:24:26
Electric Flux & Gauss Law	00:58:44
E Due to Sphere & Numericals	00:56:20
Workbook Questions (Q16-Q21)	00:29:37
	Coulomb's Law & Electric Field Intensity Numerical Based on Coulombs Law & Electric Field Intensity Charge Distribution Numerical Based on Charge Distribution Workbook Questions (Q9–Q12) Workbook Questions(Q13–Q15) Electric Flux & Gauss Law E Due to Sphere & Numericals Workbook Questions (Q16–Q21)

Electric Potential	00:29:33
Numerical Based on Electric Potential	00:57:39
Workbook Question(Q22-Q28)	00:43:30
Capacitance	00:44:22
Workbook Question (Q29-Q34)	00:52:00
Method of Images	00:28:45
Workbook Question (Q35-Q36)	00:23:05
Electric Boundary Condition	00:24:00
Workbook Question (Q37-Q41)	00:28:43
	Electric Potential Numerical Based on Electric Potential Workbook Question(Q22–Q28) Capacitance Workbook Question (Q29–Q34) Method of Images Workbook Question (Q35–Q36) Electric Boundary Condition Workbook Question (Q37–Q41)

# Chapter 3 > Magnetostatics

Lecture 01	Biot Savart's Law & Current Distribution System	00:20:52
Lecture 02	Magnetic Field Intensity due to Straight Filamentary Conductor	00:36:12
Lecture 03	Workbook Question (Q1-Q3)	00:34:01
Lecture 04	Workbook Question(Q4-Q8)	00:33:43
Lecture 05	Ampere's Law & Its Application	00:19:36
Lecture 06	Magnetic Field Due to Infinite Current Sheet	00:29:07
Lecture 07	Magnetic Field Due to Circular Conductor	00:26:25
Lecture 08	Workbook Question(Q9–Q12)	00:17:35
Lecture 09	Magnetic Field Intensity Due to Co-axial Transmission Line	00:18:47
Lecture 10	Workbook Questions (Q13-Q16)	00:23:26
Lecture 11	Magnetic Flux & Flux Density	00:20:10
Lecture 12	Magnetic Field Due to Solenoid & Toroid	00:30:19
Lecture 13	Magnetic Boundary Condition	00:18:38
Lecture 14	Workbook Questions (Q19-Q21)	00:22:39
Lecture 15	Inductance & Workbook Question (Q22-Q28)	00:35:47
Lecture 16	Faraday's Law & Workbook Questions(Q29-Q30)	00:19:14
Lecture 17	Magnetic Force	00:32:15
Lecture 18	Magnetic Scalar & Vector Potential	00:21:45

# Chapter 4 > Plane Wave Propagation

Lecture 01	Introduction to Uniform Plane wave	00:29:41
Lecture 02	Representation of Wave	00:32:01
Lecture 03	Wave Propagation in different Medium (Part 1)	00:42:22
Lecture 04	Wave Propagation in different Medium (Part 2)	00:26:02
Lecture 05	Poynting Theorem	00:42:14
Lecture 06	Workbook Questions (Q1–Q10)	00:44:01
Lecture 07	Workbook Questions (Q11–Q22)	00:53:18
Lecture 08	Workbook Questions (Q23–Q30)	00:30:14
Lecture 09	Reflection of Plane wave at Normal Incidence	00:39:53

Lecture 10	Standing wave pattern	00:37:43
Lecture 11	Location of Maxima and Minima	00:11:43
Lecture 12	Workbook Questions (Q31-Q37)	00:42:37
Lecture 13	Workbook Questions (Q38-Q47)	00:53:10
Lecture 14	Reflection of plane wave at oblique incidence (Part $-1$ )	00:59:03
Lecture 15	Reflection of plane wave at oblique incidence (Part - 2)	00:56:03
Lecture 16	Reflection of plane wave at oblique incidence (Part - 3)	00:38:52
Lecture 17	Workbook questions (Q48–Q51)	00:37:59
Lecture 18	Workbook questions (Q52–Q54)	00:27:37
Lecture 19	Workbook questions (Q55–Q59)	00:28:53
Lecture 20	Linear Polarization	00:24:51
Lecture 21	Circular & Elliptical Polarization	00:51:03
Lecture 22	Workbook questions (Q60–Q63)	00:24:49

# Chapter 5 > Transmission Line

Lecture 01	Introduction to Transmission Line	00:31:31
Lecture 02	Transmission line equation	00:27:59
Lecture 03	Lossless, Distortion less & Low loss Transmission line	00:43:51
Lecture 04	Input Impedance of Transmission Line	00:19:16
Lecture 05	Input Impedance at Different length	00:28:39
Lecture 06	Workbook Questions (Q1–Q6)	00:34:40
Lecture 07	Workbook Questions (Q7–Q15)	00:20:23
Lecture 08	Reflection Cofficient	00:18:37
Lecture 09	Reflection Cofficient for complex load	00:46:04
Lecture 10	Voltage standing wave ratio	00:37:51
Lecture 11	Workbook Questions (Q16-Q22)	00:42:01
Lecture 12	Workbook Questions (Q23–Q30)	00:24:16
Lecture 13	Transient Behaviour of Transmission Line	00:22:36
Lecture 14	Workbook Questions (Q31–Q36)	00:35:04
Lecture 15	Workbook Questions (Q37–Q47)	00:37:09
Lecture 16	Smith Chart (Part 1)	00:39:32
Lecture 17	Smith Chart (Part 2)	00:28:13
Lecture 18	Smith Chart (Part 3)	00:27:19
Lecture 19	Smith Chart (Part 4)	00:31:31
Lecture 20	Scattering Parameter & Properties	00:36:41
Lecture 21	S-Matrix for Series & Shunt Elements	00:42:30
Lecture 22	Example Based on S-Parameter	00:20:04

# Chapter 6 > Waveguides

Lecture 01	Introduction and Waveguide equations (Part 1)	00:33:17
Lecture 02	Waveguide equations (Part 2)	00:31:40

Lecture 03	Types of mode	00:11:31
Lecture 04	Transverse magnetic mode	00:18:17
Lecture 05	Waveguide parameters	00:39:21
Lecture 06	Transverse Electric mode	00:29:25
Lecture 07	Power Transmission in waveguide	00:17:38
Lecture 08	WorkBook questions (Q1–Q7)	00:27:38
Lecture 09	Workbook questions (Q8–Q15)	00:47:37

### Chapter 7 > Antenna

Lecture 02Hertzian Dipole Antenna (Part 1)00:4Lecture 03Hertzian Dipole Antenna (Part 2)00:3Lecture 04Half Wave Dipole ,Quarter wave monopole,Small loop00:1Lecture 05Workbook Questions (Q1-Q4)00:2	1:01 3:49 2:02
Lecture 03Hertzian Dipole Antenna (Part 2)00:3Lecture 04Half Wave Dipole ,Quarter wave monopole,Small loop00:1Lecture 05Workbook Questions (Q1-Q4)00:2	3:49 2:02
Lecture 04Half Wave Dipole ,Quarter wave monopole,Small loop00:1Lecture 05Workbook Questions (Q1-Q4)00:2	2:02
Lecture 05 Workbook Questions (Q1–Q4) 00:2	).10
	ハサブ
Lecture 06 Workbook Questions (Q5–Q12) 00:3	2:21
Lecture 07Antenna Characteristics parameters (part-1)00:5	2:00
Lecture 08Antenna Characteristics parameters (part-2)00:3	):05
Lecture 09 Workbook Questions (Q13–Q17) 00:2	):59
Lecture 10 Workbook Questions (Q18–Q23) 00:1	7:34
Lecture 11Polarization Loss Factor00:4	3:00
Lecture 12Friis Transmission equation00:1	5:39
Lecture 13Workbook Questions (Q24–Q26)00:1	l:02
Lecture 14Introduction to an Antenna Array00:3	):08
Lecture 15N-elements Uniform Linear Array (Part-1)00:2	5:20
Lecture 16N-elements Uniform Linear Array (Part-2)00:3	1:56
Lecture 17Workbook Questions (Q24–Q36)00:2	):49
Lecture 18 Workbook Questions (Q37–Q39) 00:3	2:35

### Chapter 8 > Basics of Radar and Optical Fibre

Lecture 01	Basics of Radar	18:48
Lecture 02	Radar Range Equation	32:43
Lecture 03	Workbook Question (Q1-Q10)	31:38
Lecture 04	Light Propagation through optical Fiber	1:05:08
Lecture 05	Types of optical fiber	31:00
Lecture 06	Workbook Questions (Q11–Q21)	42:01

### Quick Revision >

Lecture 01	Quick Revision of EMT (Part-1)	00:33:33
Lecture 02	Quick Revision of EMT (Part-2)	00:49:08



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# **ENGINEERING MATHEMATICS** ELECTRONICS ENGINEERING

# Lecture Information

00:36:36

00:25:23

Lecture 00	How to use PD-GD Course for Engineering Mathematics ?	00:28:44
Chapter 01 >	Linear Algebra	
Lecture 01	Basics of Linear Algebra	00:48:39
Lecture 02	Basic of Operation of Matrix	01:21:13
Lecture 03	Types of Square Matrix	00:49:25
Lecture 04	Eigen Value & Caley Hamilton Theorem	01:02:23
Lecture 05	Eigen Vector & Concept of Diagnoalization	01:14:16
Lecture 06	Rank of Matrix	01:11:06

### Lecture 07 Lecture 08

### Rank of Matrix Solution of Linear Equation "Basis of Vectors

### Chapter 02 > Differential Equation

Lecture 01	Basic of Differential Equation	00:27:01
Lecture 02	Solution of Ordinary Differential Equation	00:13:18
Lecture 03	Solution of Homogeneous Differential Equation	00:37:40
Lecture 04	Solution of Non- Homogeneous Differential Equation	00:56:46
Lecture 05	Cautchy Linear Differential Equation	00:17:54
Lecture 06	First Order First Degree Differential Equation	00:44:55

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### Chapter 03 > Integral Calculus

Lecture 01	Basic of Integral Calculus	00:37:55
Lecture 02	Special Function (Gamma & Beta)	00:53:06
Lecture 03	Change of Order (Double Integral)	00:50:14
Lecture 04	Application of Integral	01:11:10
Lecture 05	Zero level concept of integration	00:51:50
Lecture 06	Basic of proper and improper integrals	00:28:29

Chapter 04 ► Vector Calculus

Lecture 01	Basic of Vector	00:46:16
Lecture 02	Del Operator	00:08:03
Lecture 03	Gradient, Divergence, Curl & Directional Derivative	00:49:13
Lecture 04	Problem Based on G, D & C	00:37:04
Lecture 05	Vector Integral Calculus	00:13:07
Lecture 06	Stoke & Gauss Theorem	00:24:54
Lecture 07	Problem Based on Stoke & Gauss Theorem	00:49:00
Lecture 08	Miscellaneous	00:19:02

### Chapter 05 ► Maxima Minima

Lecture 01	Concept of Maxima & Minima (One Independent Variable)	00:18:33
Lecture 02	Analysis of Maxima & Minima	00:17:18
Lecture 03	Questions on Maxima & Minima	00:14:01
Lecture 04	Concept of Maxima & Minima (Two Independent Variable)	00:07:53
Lecture 05	Miscellaneous Questions on Maxima & Minima	00:30:06

### Chapter 06 ► Mean Value Theorem

Lecture 01	Basic of Functions & Limits	00:15:12
Lecture 02	Continuity & Differentiablity	00:54:21
Lecture 03	Rolle & Lagrange's MVT	00:28:30

### Chapter 07 > Complex Variable

Basic of Complex Variable	00:29:32
Concept of Analytic Function	00:53:35
Complex Integral	00:12:47
Residue Theorem & Cauchy Theorem	01:07:02
	Basic of Complex Variable Concept of Analytic Function Complex Integral Residue Theorem & Cauchy Theorem

Lecture 05	Complex Series Expansion	00:33:02
Lecture 06	Basic of Zeros & Singularities	00:19:04

### Chapter 08 Limits & Series Expansion

Lecture 01	Limits	00:33:36
Lecture 02	Series Expansion	00:40:43
Lecture 03	Fourier Series	00:32:21
Lecture 04	Laplace Transform	00:48:00

### Chapter 09 > Probability

Lecture 01	Sample Space	00:35:33
Lecture 02	Events	00:23:42
Lecture 03	Basic Of Probability	00:45:07
Lecture 04	Probability of Distribution (Binomial)	00:30:27
Lecture 05	Poison Distribution	00:13:27
Lecture 06	Normal Distribution	00:32:39
Lecture 07	Random Variable	01:29:04
Lecture 08	Central Tendency (Mean, median, mode)	00:55:22
Lecture 09	Standard deviation & Coefficient of Variance	00:06:14
Lecture 10	Questions Based on Central Tendency	00:34:02
Lecture 11	Basics of Corelation & Regression Analysis	00:40:45
Lecture 12	Some more on probability(Bayes theorem) (Part-1)	00:24:58
Lecture 13	Some more on probability (Part-2)	00:20:31

### Chapter 10 > Numerical Methods

Lecture 01	Methods to solve Non-Linear Algebric Equation	00:54:03
Lecture 02	Question of Non-Linear Algebric Equation	00:30:55
Lecture 03	Methods to Solve Differential Equation	00:12:25
Lecture 04	Question of Differential Equation	00:30:30
Lecture 05	Method to Solve Numerical Integral	00:15:05
Lecture 06	Questions of Numerical Integrals	00:24:59
Lecture 06	Questions of Numerical Integrals	00:24:59

### Preparation Strategy >

Lecture 01

Prepare GATE Maths Strategically ??? By : Gurupal Sir

00:48:00



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# **NETWORK THEORY** ELECTRONICS ENGINEERING

# Lecture Information

Lecture 00	How to use PD-GD Course for Network Theory ?	00:21:58

### Chapter 01 > Basic Concept of Networks

Lecture 01	Types of Network Element	00:51:05
Lecture 02	Analysis of Passive Elements (Resistor)	00:25:39
Lecture 03	Absorbed and Delivered Power	00:24:01
Lecture 04	Analysis of Passive Elements (Inductor)	00:16:56
Lecture 05	Analysis of Passive Elements (Capacitor)	00:15:54
Lecture 06	Series and Parallel Equivalent	00:27:41
Lecture 07	Kirchoff's Law (KVL and KCL)	00:19:38
Lecture 08	Example based on KVL & KCL	00:32:44
Lecture 09	Voltage Divider and Current Divider Rule	00:30:33
Lecture 10	Start to Delta and Delta to Star Conversion	00:27:52
Lecture 11	Lattice Network	00:14:18
Lecture 12	Representation of Voltage and Current Source	00:26:03
Lecture 13	Questions based on Voltage and Current Source Representation	00:12:23
Lecture 14	Important Equivalent Circuit	00:19:02
Lecture 15	Source Transformation	00:28:07
Lecture 16	Important Practice Question (Part -1)	00:12:32

Lecture 17	Important Practice Question (Part -2)	00:09:08
Lecture 18	Important Practice Question (Part -3)	00:11:03
Lecture 19	Important Practice Question (Part -4)	00:08:05
Lecture 20	Important Practice Question (Part -5)	00:05:43
Lecture 21	Important Practice Question (Part -6)	00:12:18
Lecture 22	Important Practice Question (Part -7)	00:07:52
Lecture 23	Important Practice Question (Part -8)	00:12:18
Lecture 24	Important Practice Question (Part -9)	00:07:33
Lecture 25	Important Practice Question (Part -10)	00:07:46
Lecture 26	Important Practice Question (Part -11)	00:06:17
Lecture 27	Important Practice Question (Part $-12$ , part a and part b)	00:07:36
Lecture 28	Important Practice Question (Part -13)	00:15:35
Lecture 29	Important Practice Question (Part -14)	00:42:04
Lecture 30	Voltmeter and Ammeter	00:16:11
Lecture 31	Question based on Voltmeter and Ammeter	00:12:58
Lecture 32	Concept of Supernode with Example	00:18:31
Lecture 33	Question based on Supernode	00:08:57
Lecture 34	Concept of Supermesh with Example	00:09:06
Lecture 35	Question based on Supernode and Supermesh	00:13:51
Lecture 36	Important Question based on Capacitor (Part-1)	00:06:46
Lecture 37	Important Question based on Capacitor (Part-2)	00:10:52
Lecture 38	Important Question based on Capacitor (Part-3)	00:11:57
Lecture 39	Important Question based on Capacitor (Part-4)	00:13:36
Lecture 40	Average and RMS Value of Periodic Waveform (Part-1)	00:32:14
Lecture 41	Average and RMS Value of Periodic Waveform (Part-2)	00:11:01
Lecture 42	Concept of Equipotential With Example	00:29:54
Lecture 43	Important Example based on Equipotential (Part-1)	00:06:54
Lecture 44	Important Example based on Equipotential (Part-2)	00:25:30
Lecture 45	Important Question based on Equipotential (Part-3)	00:16:37
Lecture 46	Equivalent Impedance of Cube	00:08:52
Lecture 47	Equivalent Resistance across diagonal of Cube	00:16:10
Lecture 48	Equivalent Resistance across edge of Cube	00:13:57
Lecture 49	Equivalent Resistance across diagonal of face of Cube	00:15:22

# Chapter 02 > Two-port Networks

Lecture 01	Introduction of Two Port Network	00:09:13
Lecture 02	Introduction of Z-Parameter	00:33:39
Lecture 03	Example based on Z-Parameter	00:18:05
Lecture 04	Z-Parameter of Symmetric Lattice Network	00:14:54
Lecture 05	Introduction of Y Parameter	00:22:28

Lecture 06	Example based on Y Parameter	00:25:50
Lecture 07	Reciprocal and Symmetrical Network	00:26:37
Lecture 08	Question based on Z and Y Parameter(Dependent Source)	00:14:10
Lecture 09	Question based on Z and Y Parameter(Depen (Part-2)	00:19:24
Lecture 10	Introduction of h-Parameter	00:16:48
Lecture 11	Example based on h Parameter	00:24:43
Lecture 12	Question based on h-Parameter	00:07:43
Lecture 13	Introduction of g-Parameter	00:07:47
Lecture 14	Introduction of Transmission and Inverse Trans	00:09:40
Lecture 15	Example based on ABCD Parameter	00:12:08
Lecture 16	Question based on ABCD Parameter	00:11:30
Lecture 17	Important Question (Part-1)	00:08:41
Lecture 18	Important Question (Part-2)	00:09:48
Lecture 19	Important Question (Part-3)	00:12:14
Lecture 20	Important Question (Part-4)	00:16:18
Lecture 21	Transformer as a Two Port Network	00:20:05
Lecture 22	Gyrator as a Two Port Network	00:11:44
Lecture 23	Interconnection of Two Port Network (Part-1)	00:18:20
Lecture 24	Interconnection of Two Port Network (Part-2)	00:09:03
Lecture 25	Interconnection of Two Port Network (Part-3)	00:10:13
Lecture 26	Question based on Cascade Connection (Part-1)	00:14:04
Lecture 27	Question based on Cascade Connection (Part-2)	00:14:33
Lecture 28	Question based on Cascade Connection (Part-3)	00:21:05
Lecture 29	Question based on Parallel Connection	00:17:37
Lecture 30	Important Question	00:17:26
Lecture 31	Good Concept Through Question	00:19:25
Lecture 32	Characteristic Impedance of Network	00:08:52
	Bartlett's Bisection Theorem	PDF

# Chapter 03 > Network Theorems

Lecture 01	Introduction of Thevenin's Theorem	00:13:44
Lecture 02	Example Based on Thevenin's Theorem (Part-1)	00:23:04
Lecture 03	Example Based on Thevenin's Theorem (Part-2)	00:10:40
Lecture 04	Question Based on Thevenin's Theorem (Part-1)	00:15:09
Lecture 05	Question Based on Thevenin's Theorem (Part-2)	00:15:19
Lecture 06	Question Based on Thevenin's Theorem (Part-3)	00:06:16
Lecture 07	Question Based on Thevenin's Theorem (Part-4)	00:13:51
Lecture 08	Question Based on Thevenin's Theorem (Part-5)	00:17:06
Lecture 09	Question Based on Thevenin's Theorem (Part-6)	00:09:00
Lecture 10	Introduction of Norton's Theorem	00:11:36

Lecture 11	Question on Norton's Theorem (Part-1)	00:08:02
Lecture 12	Question Based on Norton's Theorem (Part-2)	00:10:34
Lecture 13	Question Based on Thevenin & Norton (Part-1)	00:05:12
Lecture 14	Question Based on Thevenin & Norton (Part-2)	00:17:11
Lecture 15	Question Based on Thevenin & Norton (Part-3)	00:13:54
Lecture 16	Important Question (miscellaneous)	00:15:52
Lecture 17	Introduction of Maximum Power Transfer Theorem	00:17:16
Lecture 18	Question Based on M.P.T	00:11:21
Lecture 19	Question based on MPT (Part-2)	00:17:22
Lecture 20	MPT in Complex Network	00:25:06
Lecture 21	Question based on MPT (Complex Network) (Part-1)	00:10:45
Lecture 22	Question Based on MPT (Complex Network) (Part-2)	00:11:23
Lecture 23	Important Question Based on MPT (Part-1)	00:16:15
Lecture 24	Important Question Based on MPT (Part-2)	00:13:47
Lecture 25	Introduction of Superposition Theorem	00:25:33
Lecture 26	Question Based on Superposition Theorem (Part-1)	00:10:30
Lecture 27	Question Based on Superposition Theorem (Part-2)	00:11:52
Lecture 28	Concept and Example of Reciprocity Theorem	00:12:00
Lecture 29	Question Based on Reciprocity Theorem (Part-1)	00:07:34
Lecture 30	Question Based on Reciprocity Theorem (Part-2)	00:06:52
Lecture 31	Question Based on Reciprocity Theorem (Part-3)	00:11:39
Lecture 32	Question Based on Reciprocity Theorem (Part-4)	00:10:36
Lecture 33	Question Based on Reciprocity Theorem (Part-5)	00:07:33
Lecture 34	Introduction of Millman's & Dual of Millman's Theorem	00:12:36
Lecture 35	Seven methods for single question	00:35:06

# Chapter 04 > Transient Analysis

Lecture 01	Introduction of Transient	00:52:42
Lecture 02	Example of $0^-  0   0^+$ in Transient Analysis	00:16:27
Lecture 03	Analysis of First order Differential Equation	00:23:37
Lecture 04	Transform Domain of Inductor & Capacitor	00:14:11
Lecture 05	Questions Based on RL Network (1)	00:53:20
Lecture 06	Questions Based on RL Network (2)	00:19:36
Lecture 07	Concept of Time Constant in RL Circuit	00:31:04
Lecture 08	Questions Based on RL Network (3)	00:21:18
Lecture 09	Questions Based on RL Network (4)	00:11:57
Lecture 10	Questions Based on RL Network (5)	00:06:53
Lecture 11	Questions Based on RL Network (6)	00:10:29
Lecture 12	Questions Based on RL Network (7)	00:11:23

Lecture 13	Questions Based on RL Network (8)	00:34:41
Lecture 14	Questions Based on RL Network (9)	00:24:47
Lecture 15	Questions Based on RL Network (10)	00:09:09
Lecture 16	Impulse & Step Response of Series RL Network	00:25:05
Lecture 17	Pulse Response of Series RL Network	00:20:35
Lecture 18	Important Question of Series RL Network (11)	00:44:30
Lecture 19	Important Question of RL Network (12)	00:10:35
Lecture 20	Important Question of RL Network (13)	00:14:25
Lecture 21	Transient & Steady State Behavior of Capacitor	00:37:57
Lecture 22	Question Based on RC Network (1)	00:12:15
Lecture 23	Question Based on RC Network (2)	00:06:15
Lecture 24	Question Based on RC Network (3)	00:26:09
Lecture 25	Question Based on RC Network (4)	00:19:38
Lecture 26	Question Based on RC Network (5)	00:21:10
Lecture 27	Question Based on RC Network (6)	00:11:33
Lecture 28	Question Based on RC Network (7)	00:11:08
Lecture 29	Important Question on RC Network (8)	00:25:20
Lecture 30	Important Question on RC Network (9)	00:16:00
Lecture 31	Most Important Concept of RC Network	00:55:24
Lecture 32	Question Based on RLC Network (1)	00:08:14
Lecture 33	Question Based on RLC Network (2)	00:08:35
Lecture 34	Question Based on RLC Network (3)	00:14:00
Lecture 35	Question Based on RLC Network (4)	00:40:27
Lecture 36	Question Based on RLC Network (5)	00:26:16
Lecture 37	Challenging Question of Transient	00:19:51

# Chapter 05 > Sinusoidal Steady State Response

Lecture 01	Introduction of Sinusoidal Steady State Analysis	00:29:33
Lecture 02	Question based on Sinusoidal Steady (Q1-Q2)	00:10:17
Lecture 03	Question based on Sinusoidal Steady (Q3-Q4)	00:15:06
Lecture 04	Question based on Sinusoidal Steady (Q5-Q6)	00:19:57
Lecture 05	Concept of Transient Free Response	00:22:39
Lecture 06	Question Based on Transient Free Response (Q7-Q8)	00:06:15
Lecture 07	Question Based on Transient Free Response (Q9)	00:15:08

# Chapter 06 > Phasor and Locus Diagram

Lecture 01	Introduction of Phasor Diagram	00:14:11
Lecture 02	Series RL Network	00:29:58
Lecture 03	Series RC Network	00:11:56

Lecture 04	Series RLC Network	00:16:35
Lecture 05	Parallel RL Network	00:14:10
Lecture 06	Parallel RC Network	00:09:04
Lecture 07	Parallel RLC Network	00:14:51
Lecture 08	Question Based on Phasor Diagram (Q1-Q2)	00:12:45
Lecture 09	Question Based on Phasor Diagram (Q3-Q4)	00:16:06
Lecture 10	Question Based on Phasor Diagram (Q5-Q6)	00:17:19
Lecture 11	Question Based on Phasor Diagram (Q7–Q8)	00:14:10
Lecture 12	Question Based on Phasor Diagram (Q9-Q10)	00:14:45
Lecture 13	Introduction of Locus Diagram	00:15:27
Lecture 14	Locus Diagram of Series RL Network	00:16:55
Lecture 15	Locus Diagram of Series RC Network	00:16:19
Lecture 16	Question Based on Locus Diagram (Q12-Q13)	00:20:21
Lecture 17	Question Based on Locus Diagram (Q14)	00:16:16
Lecture 18	Question Based on Locus Diagram (Q15)	00:11:07

# Chapter 07 ► Resonance

Lecture 01	Series RLC Resonance Circuit	00:48:23
Lecture 02	Paraller RLC Resonance Circuit	00:28:35
Lecture 03	Quality Factor	00:32:35
Lecture 04	Question Based on Resonance (Q1-Q2)	00:11:09
Lecture 05	Question Based on Resonance (Q3-Q4)	00:12:22
Lecture 06	Question Based on Resonance (Q5-Q6)	00:06:57
Lecture 07	Question Based on Resonance (Q7-Q8)	00:16:19
Lecture 08	Question Based on Resonance (Q9-Q10)	00:08:58
Lecture 09	Question Based on Resonance (Q11-Q12)	00:15:47
Lecture 10	Question Based on Resonance (Q13-Q14)	00:34:14
Lecture 11	Important Question Based on Resonance (Part-1)	00:13:19
Lecture 12	Question Based on Resonance (Q15-Q16)	00:08:42
Lecture 13	Important Question Based on Resonance (Part-2)	00:26:01
Lecture 14	Question Based on Resonance (Q17–Q18)	00:14:05
Lecture 15	Maximum Voltage Across R, L & C	00:21:15

# Chapter 08 > Complex Power

Lecture 01	Introduction of Complex Power	00:32:00
Lecture 02	Example Based on Complex Power	00:13:37
Lecture 03	Question Based on Complex Power (Q 1)	00:13:21
Lecture 04	Question Based on Complex Power (Q2)	00:10:51
Lecture 05	Question Based on Complex Power (Q3–Q4)	00:07:41

Lecture 06	Question Based on Complex Power (Q5)	00:11:11
Lecture 07	Question Based on Complex Power (Q6-Q7)	00:08:19
Lecture 08	Question Based on Complex Power (Q8)	00:13:08
Lecture 09	Question Based on Complex Power (Q9 & Q10)	00:18:12
Lecture 10	Question Based on Complex Power (Q11)	00:08:43
Lecture 11	Question Based on Complex Power (Q12)	00:16:11
Lecture 12	Question Based on Complex Power (Q13-Q14)	00:16:13
Lecture 13	Question Based on Complex Power (Q15)	00:17:04

### Chapter 09 Magnetic Coupling

Lecture 01	Introduction of Magnetic Coupling	00:31:21
Lecture 02	Concept Of Dot Notation	00:18:04
Lecture 03	Example Based On Notation	00:16:07
Lecture 04	Series Equivalent Circuit	00:08:58
Lecture 05	Parallel Equivalent Circuit	00:13:50
Lecture 06	Question Based On Magnetic Coupling (Part-1)	00:04:27
Lecture 07	Question Based On Magnetic Coupling (Part-2)	00:12:26
Lecture 08	Question Based On Magnetic Coupling (Part-3)	00:05:30
Lecture 09	Question Based On Magnetic Coupling (Part-4)	00:09:21
Lecture 10	Question Based On Magnetic Coupling (Part-5)	00:07:53
Lecture 11	Concept of Reflected input impedance of Transformer	00:09:53
Lecture 12	Question Based On Magnetic Coupling (Part-6)	00:15:02

### Chapter 10 Graph Theory

Lecture 01	Introduction of Graph Theory	00:35:23
Lecture 02	Tree & Complementary Tree	00:28:24
Lecture 03	Incidence & Reduced Incedence Matrix	00:55:30
Lecture 04	Tie-Set & Cut Set Matrix	00:31:34
Lecture 05	Question Based on Graph Theory	00:51:00



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# **SIGNALS** & **SYSTEMS** ELECTRONICS ENGINEERING

# Lecture Information

Lecture 01	Introduction to Signals & Systems	00:48:22
Lecture 02	Operations on Signals	01:42:29
Lecture 03	Elementary Signals	03:02:00
Lecture 04	Dirac Delta Function & Its Properties	01:45:38
Lecture 05	Special Functions	02:08:15
Lecture 06	Workbook Questions (Part 1)	03:38:45
Lecture 07	Even oblique Odd, Conjugate Symmetric & Antisymmetric	01:30:15
Lecture 08	Continuous Time Periodic Signals	01:47:03
Lecture 09	Discrete Time Periodic Signals	01:07:39
Lecture 10	Workbook Questions (Part 2)	02:21:58
Lecture 11	Continuous Time Energy and Power Signals (Part 1)	02:05:19
Lecture 12	Continuous Time Energy and Power Signals (Part 2)	02:06:11
Lecture 13	Discrete Time Energy and Power Signals	01:01:59
Lecture 14	Workbook Questions (Part 3)	02:33:29
Lecture 15	Properties of Systems (Part 1)	01:58:37
Lecture 16	Properties of Systems (Part 2)	02:38:10
Lecture 17	Linear Time Invariant Systems	01:06:00
Lecture 18	Invertible and Noninvertible Systems	01:57:22
Lecture 19	BIBO Stability Criteria and Recursive Systems	02:58:21
Lecture 20	Workbook Question (Part 1)	03:07:20

Lecture 21	Workbook Question (Part 2)	01:05:09
Lecture 22	Convolution Integral (Part 1)	01:34:58
Lecture 23	Convolution Integral (Part 2)	01:07:55
Lecture 24	Convolution Summation	00:56:28
Lecture 25	Continuous Time Fourier Series (Part 1)	02:26:13
Lecture 26	Continuous Time Fourier Series (Part 2)	01:33:04
Lecture 27	Continuous Time Fourier Series (Part 3)	01:40:12
Lecture 28	Continuous Time Fourier Series (Part 4)	02:35:16
Lecture 29	Workbook Question (Part 1)	03:29:35
Lecture 30	Workbook Question (Part 2)	02:13:34
Lecture 30A	Concept of Floor & Ceiling	00:58:07
Lecture 31	Continuous Time Fourier Transform (Part 1)	01:48:47
Lecture 32	Continuous Time Fourier Transform (Part 2)	02:49:41
Lecture 33	Continuous Time Fourier Transform (Part 3)	02:54:44
Lecture 34A	Workbook Question (Part 1)	03:17:33
Lecture 34B	Workbook Question (Part 2)	04:01:18
Lecture 34C	Workbook Question (Part 3)	02:00:36
Lecture 35	Discrete Time Fourier Transform (Part 1)	01:20:10
Lecture 36	Discrete Time Fourier Transform (Part 2)	01:00:17
Lecture 37	Workbook Questions	00:52:32
Lecture 38	Laplace Transform (Part 1)	01:40:31
Lecture 39	Laplace Transform (Part 2)	02:08:49
Lecture 40	Laplace Transform (Part 3)	02:26:41
Lecture 41	Laplace Transform (Part 4)	01:55:15
Lecture 42	Workbook Question (Part 1)	04:02:29
Lecture 42A	Workbook Question (Part 2)	00:23:56
Lecture 43	Z Transform (Part 1)	03:09:30
Lecture 44	Z Transform (Part 2)	01:59:49
Lecture 45	Z Transform (Part 3)	01:53:52
Lecture 46	Z Transform (Part 4)	01:43:02
Lecture 47	Workbook Question (Part 1)	02:46:57
Lecture 48	Workbook Question (Part 2)	01:15:10
Lecture 49	Discrete Time Fourier Series	00:43:33
Lecture 50	Discrete Fourier Transform (Part 1)	01:46:57
Lecture 51	Discrete Fourier Transform (Part 2)	01:54:22
Lecture 52	Fast Fourier Transform (Part 1)	02:13:39
Lecture 53	Fast Fourier Transform (Part 2)	01:11:11
Lecture 54	Workbook Questions	00:56:48
Lecture 55	Digital Filters (Part 1)	01:41:11

Lecture 56	Digital Filters (Part 2)	01:04:21
Lecture 57	Digital Filters (Part 3)	02:29:06
Lecture 58	Workbook Questions	00:45:18
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