**LECTURE PLAN** 

SEMESTER/CLASS

6<sup>th</sup> ECE

SESSION **JAN. - JUNE 2018** 

SUBJECT: RWS

**SESSIONAL MARKS: 25 THEORY MARKS: 50** 

NAME OF TEACHER : ANITA KUCHHAL

**OBJECTIVES OF CONCERNED SUBJECT:** To develop competence for report writing. OUTCOME OF CONCERNED SUBJECT: Able to write complex writings and techniques

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	29/01/18	Meaning of report and its importance	Borowick, Jerome. N. <i>Technical</i> <i>Communication and its Applications</i> . New Delhi:PHI2000
2	12/02/18	Types of reports	
3	19/02/18	Format of reports	
4	26/02/18	Structure of reports	
5	05/03/18	Use of illustrations	
6	12/03/18	Preliminary steps and procedure of writing reports	
7	19/03/18	Technical reports	
8	26/03/18	Business reports	

# **TEXT/REFERENCE BOOKS:**

- A. Guffey, Mary Ellen. Business Communication: Process & Product. USA: South western College Publishing, 2000.
- B. Kumar, Sanjay and Pushp Lata. Communication Skills. Delhi: OUP, 2011

Home Assignments: 4 –5 assignments are given during the semester.

# **Evaluation Procedure**

1.	Surprise Quiz/ Tutorial Test	5 Marks
2.	Assignment / Project / Performance in the Class	5 Marks
3.	Minor Tests (Two tests having equal weightage)	15 Marks
	Minor Test I : 06 – 09 March, 2018	

SUBJECT CODE :HUM302B

**DEPARTMENT** : Applied Science

**DURATION OF EXAMS: 2 HOURS** 

	Minor Test II : 17 -20 April, 2018	
4.	Major test (University Examination)	75 Marks

Attendance Record – Candidate should attend at least75% attendance of the total classes held of the subject

Chamber consultation hour: Any vacant period.

- 1. In the semester examination, the examiner will set 08 questions in all selecting two from each unit (1 & 2 from unit I, 3 & 4 from unit II, 5 & 6 from unit III and 7 & 8 from unit IV). The students will be required to attempt only 5 questions selecting at least one question from each unit. All questions will carry equal marks.
- 2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.

### **LECTURE PLAN**



SEMESTER/CLASS	ELECTRICAL-6TH	SESSION	JAN JUNE 2018
SUBJECT: ELECTR	IC POWER GENERATION	SUBJECT CO	DE : EE-308-B
SESSIONAL MARKS: 25	THEORY MARKS: 7	5 DURATION O	OF EXAMS: 3 HOURS
NAME OF TEACHER :	MR. ASHWANI KUMAR	DEPARTME	NT : ELECTRICAL ENGG.

**OBJECTIVES OF CONCERNED SUBJECT:** To introduce the concepts and phenomenon of different sources of Power Generation. To give an idea about the fundamental concepts of electrical power distribution, both AC & DC. To familiarize the students with the Tariff methods for electrical energy consumption in the prospect of optimum utilization of electrical energy. To impart the knowledge of different renewable energy sources used in the generating stations with the analytical methods.

OUTCOME OF CONCERNED SUBJECT: Articulate power system concepts required to engineering problems. Ability to discuss various power sources for generation of power Merit/Demerits. Ability to plot the power /Energy demand in the form of graph. Formulate the use of renewable energy sources in recent trends.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	08/01/18	Energy Sources, Their Availability	B.R.Gupta
2	09/01/18	Recent Trends In Power Generation	B.R.Gupta
3	10/01/18	Interconnected Generation Of Power Plants	B.R.Gupta
4	11/01/18	Load Forecasting,	Power System – Jb Gupta
5	15/01/18	Load Curves	Power System –Jb Gupta
6	16/01/18	Load Duration Curve, Base Load And Peak Load Power Plants	Power System – Jb Gupta
7	17/01/18	Connected Load, Maximum Demand	Power System – Jb Gupta
8	18/01/18	Demand Factor, Group Diversity Factor, Load Factor	Power System – Jb Gupta
9	23/01/18	Significance Of Load Factor, Plant Factor, Capacity Factor	Power System –Jb Gupta
10	24/01/18	Selection Of Unit Size, No. Of Units	Power System –Jb Gupta
11	25/01/18	Reserves, Cost Of Power Generation,	Power System –Jb Gupta
12	29/01/18 30/01/18, 31/01/18	Depreciation	Power System –Jb Gupta
13	01/02/18 05/02/18	Depreciation, Tariff	Power System – Jb Gupta

14	06/02/18	Test	V.K.Mehta
		Selection Of Site Canacity Calculations	
15	07/02/18	Classification	Power System –Jb Gupta
16	08/02/18	Advantages, Disadvantages, Schematic Diagram	Power System – Jb Gupta
	12/02/18 13/02/1		
17	8	Working Of Thermal Power Stations	Power System –Jb Gupta
19	14/02/18,15/02/1	Selection Of Site, Capacity Calculations,	Power System – Jb Gupta
10	8	Classification Npp	
	19/02/18	Advantages Disadvantages Schematic Diagram	Power System – Ib Gupta
19	20/02/18	Of Npp	
	21/02/10		
20	21/02/18,	Nuclear Power Plant	Power System – Jb Gupta
21	22/02/18	Selection Of Site, Capacity Calculations,	
21	22/02/18	Classification Hep	Power System –Jb Gupta
		Selection Of Site Canacity Calculations	
22	26/02/18	Classification Dep	Power System – Jb Gupta
		-	
	27/02/18,	Test	
23	28/02/18,	Advantages, Disadvantages, Schematic Diagram	Downer Swatam . Ih Cunta
	01/03/18	Нер	Power System – Jo Gupta
24	05/03/18,	Selection Of Site, Capacity Calculations,	Downey System It Counts
	12/03/18,	Classification Dep	Power System – Jo Gupta
	22/02/18	Test	
25	13/03/18	Wind	Power System – Jb Gupta
26	14/03/18	Types Ofwind Power Plant	
	1 00/10		Power System –Jb Gupta
27	15/03/18	Site Selection Advantages, Disadvantages	Power System –Jb Gupta
28	19/03/18	Solar	Power System – Jb Gupta
29	20/03/18	Types Of Solar Plants	Power System –Jb Gupta
30	26/03/18	Site Selection Advantages, Disadvantages	
			Power System – Jb Gupta
31	27/03/18/	Tidal	Power System –Jb Gupta
32	28/03/18	Site Selection Advantages, Disadvantages	Power System –Jb Gupta
33	29/03/18	Ocean	Power System – Jb Gupta
34	02/04/18	Site Selection Advantages, Disadvantages	Power System – Jb Gupta
35	03/04/18	Geothermal Sources	Power System –Jb Gupta
36		Site Selection Advantages, Disadvantages	Power System – Jb Gupta
37	21/03/18	Fuel Cell	Power System –Jb Gupta
38	04/04/18	Site Selection Advantages, Disadvantages	Power System _ Ih Gunta
20	05/04/19	Mbd System	i ower System – Jo Oupta
57	03/04/18		Power System –Jb Gupta

40	09/04/18	Site Selection Advantages, Disadvantages	Power System – Jb Gupta
41	10/04/18/	Test	
42	11/04/18	Solution Of Previous Year Question Paper	Power System – Jb Gupta

# A. ELECTRIC POWER GENERATION, B.R.GUPTA

# B. ELECTRIC POWER: S.L. UPPAL (KHANNA PUBLISHING)

C. POWER SYSTEM –JB GUPTA

### Home Assignments: 4 –5 assignments are given during the semester.

### **Evaluation Procedure**

1.	Surprise Quiz/ Tutorial Test	5 Marks
2.	Assignment / Project / Performance in the Class	5 Marks
3.	Minor Tests (Two tests having equal weightage)	15 Marks
	Minor Test I : 06 – 09 March, 2018	
	Minor Test II : 17 -20 April, 2018	
4.	Major test (University Examination)	75 Marks

Attendance Record – Candidate should attend at least75% attendance of the total classes held of the subject

Chamber consultation hour: Any vacant period.

- 1. In the semester examination, the examiner will set 08 questions in all selecting two from each unit (1 & 2 from unit I, 3 & 4 from unit II, 5 & 6 from unit III and 7 & 8 from unit IV). The students will be required to attempt only 5 questions selecting at least one question from each unit. All questions will carry equal marks.
- 2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.

#### **LECTURE PLAN**

SESSION

**SUBJECT CODE** : EE-302-B

**DURATION OF EXAMS: 3 HOURS** 

SUBJECT: POWER SYSTEM-II

SEMESTER/CLASS

**SESSIONAL MARKS: 25 THEORY MARKS: 75** 

**NAME OF TEACHER** : MR. ASHWANI KUMAR/NAVEEN KAUSHIK

**OBJECTIVES OF CONCERNED SUBJECT:** To introduce the concepts and phenomenon of different sources of Power System switchgear and protection. To give an idea about the fundamental concepts of electrical power distribution, both AC & DC.

OUTCOME OF CONCERNED SUBJECT: Student understand the switchgear working and protective devices. students become able to analysis power system relaying and circuit breaking phenomenon.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	08/01/18	Transient On Transmission Line	В
2	09/01/18	Short Ckt. Of Synchronous Machine At No Load And On Full Load	В
3	11/01/18	Numerical	
4	12/01/18	Symmetrical Component Transformation	В
5	15/01/18	Phase Shift In Star-Delta Transformation	В
6	16/01/18	Sequence Impedances	В
7	18/01/18	Sequence Impedances	В
8	19/01/18	Numericals	
9	22/01/18	Types Of Faults	В
10	23/01/18	Types Of Faults With Numericals	В
11	25/01/18	Numericals	A,B
12	26/01/18	Numericals	
13	02/02/18	Types Of Arc Interruptions,	А
14	02/02/18	Types Of Arc Interruptions,	
15	06/02/18	Restriking Voltage Transients	А
16	08/02/18	Numericals	
17	09/02/18	Current Chopping, C.B Rating	А
18	12/02/18	Duties Of C. B & Types Of C.Bs	А



EE,  $6^{TH}$ 

**JAN. - JUNE 2018** 

**DEPARTMENT** : EE

19	16//02/18	Types Of C.Bs	А
20	19/02/18	DC Circuit Breaker	А
21	20/02/18, 26/02/18	Testing Of Circuit Breaker	А
22	27/02/18	Numericals	
23	01/03/18	Numericals	
24	05/03/18	Essential Qualities Of Relay, Relay Classification	B,C
25	12/03/18	Principal Types Of Electromagnetic Relays, I.E. Attracted Armature, Induction Disc	А
26	13/03/18/	Induction Cup Types, Overcurrent,	А
27	15/03/18	Instantaneous Over-Current	А
28	16/03/18	IDMT, Directional And Differential Relays	А
29	19/03/18	Distance Relays, Plain Impedance,	А
30	20/03/18	Mho, Reactance Relays,	B,C
31	22/03/18	Zone Of Protection, Primary And Backup Protections,	B,C
32	23/03/18	TransmissionV Line & Feeder Protection	А
33	26/03/18	Pilot Wire And Carrier Current Protection,	А
34	27/03/18	Transformer, Generator	А
35	29/03/18	Motor And Bus Zone Protection.	А
36	30/03/18	REVISION/NUMERICALS	С
37	31/03/18	TEST	С
38	02/03/18	Classification Of Static Relays, Amplitude And Phase Comparators,	B,C
39	3/03/18	Block-Spike And Block-Average Comparators	С
40	5/03/18	Rectifier Type Relays. Introduction To Digital Relay	С
41	6/03/18	Basic Principles. Application Of Microprocessors And Computers	B,C
42	9/03/18	Recent Trends. Travelling Wave Relay,	B,C
43	10/03/18	Relaying Schemes Based On Microwave And Optical Fiber Link	С
44	12/03/18	REVISION/NUMERICALS	С
45	13/03/18	TEST	С

## A. POWER SYSTEM PROTECTION & SWITCHGEAR: B.RAM, TMH

# B. POWER SYSTEM ANALYSIS;NAGRATH & KOTHARI;TMH

## C. POWER SYSTEM- JB GUPTA

Home Assignments: 4 –5 assignments are given during the semester.

### **Evaluation Procedure**

1.	Surprise Quiz/ Tutorial Test	5 Marks
2.	Assignment / Project / Performance in the Class	5 Marks
3.	Minor Tests (Two tests having equal weightage)	15 Marks
	Minor Test I : 06 – 09 March, 2018	
	Minor Test II : 17 -20 April, 2018	
4.	Major test (University Examination)	75 Marks

Attendance Record – Candidate should attend at least75% attendance of the total classes held of the subject

Chamber consultation hour: Any vacant period.

- 1. In the semester examination, the examiner will set 08 questions in all selecting two from each unit (1 & 2 from unit I, 3 & 4 from unit II, 5 & 6 from unit III and 7 & 8 from unit IV). The students will be required to attempt only 5 questions selecting at least one question from each unit. All questions will carry equal marks.
- 2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.

# **LECTURE PLAN**



		4	
SEMESTER/CLASS		6 <sup>th</sup> EE SES	SION JAN JUNE 2018
SUBJECT	: COMMUNIC	CATION SYSTEMS & TECHNOLOGY SUP	BJECT CODE : ECE312B
SESSIONA	AL MARKS: 25	THEORY MARKS: 75 DURAT	TION OF EXAMS: 3 HOURS
NAME OF	TEACHER : RA	KESH VERMA AND DR. NAVEEN KU MALIK	DEPARTMENT : ECE
OBJECTI	VES OF CONCER	NED SUBJECT:	
To train the	e engineers for comm	nunication companies with basic understanding of cor	nmunication systems.
OUTCOM	E OF CONCERNE	D SUBJECT:	
Students are technical, e	e ready to analyze, p conomic, environme	lan and apply the acquired knowledge in communicat ntal and social contexts.	ion engineering industry with
Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	9-1-18	Modulation, Demodulation, Radio Frequency Spectrum, Signals & their classification	Communication Systems, By Dr. Manoj Duhan – I. K. International
2	10-1-18	Limitations & Advantages of a Communication System Comparison of Analog & Digital Communication Systems	Communication Systems, By Dr. Manoj Duhan – I. K. International
3	12-1-18	Historical Perspective, Modes & Medias of Communication	Communication Systems, By Dr. Manoj Duhan – I. K. International
4	16-1-18	Sources of Noise, External & Internal Noise, Noise Calculations, Noise Figure	Communication Systems, By Dr. Manoj Duhan – I. K. International
5	17-1-18	Sources of Noise, External & Internal Noise, Noise Calculations, Noise Figure	Communication Systems, By Dr. Manoj Duhan – I. K. International
6	19-1-18	Band Pass Noise Model, Cascaded States & its Noise Figure Calculation, Signal in presence of Noise	Communication Systems, By Dr. Manoj Duhan – I. K. International
7	23-1-18	Pre-Emphasis & De- Emphasis, Noise Quieting Effect, Capture Effect, Noise in Modulation Systems	Communication Systems, By Dr. Manoj Duhan – I. K. International
8	24-1-18	(AM) Basic definition & derivation for Modulation & Modulation Index, Modulation & Demodulation of AM, Suppressed Carrier Modulation	Electronic Communication Systems By Kennedy – TMH
9	2-2-18	Quadrature Amplitude Modulation, SSB-SC, DSB-SC, VSB Modulation & Demodulation, Comparison of various AM Systems	Electronic Communication Systems By Kennedy – TMH
10	6-2-18	Generation of AM waves	Electronic Communication Systems By Kennedy – TMH

11	7-2-18	Basic definition & derivation for Modulation & Modulation Index	Electronic Communication Systems By Kennedy – TMH
12	9-2-18	Generation of FM waves, Comparison between PM & FM, Frequency Spectrum of FM, B.W. & required spectra	Electronic Communication Systems By Kennedy – TMH
13	13-2-18	Types of FM, vector representation of FM, Universal Curve, Multiple FM, Demodulation of FM waves	Electronic Communication Systems By Kennedy – TMH
14	16-2-18	Demodulation of PM waves, Comparison between AM & FM	Electronic Communication Systems By Kennedy – TMH
15	20-2-18	Revision of syllabus covered	
16	13-3-18	Sampling theory, TDM	Communication Systems, By Singh & Sapre - TMH
17	14-3-18	FDM, PAM, PWM, PPM	Communication Systems, By Singh & Sapre - TMH
18	16-3-18	Modulation & Demodulation techniques of above all	Communication Systems, By Singh & Sapre - TMH
19	20-3-18	Elements of Pulse Code Modulation, Noise in PCM Systems, Bandwidth of PCM Systems,	Communication Systems, By Singh & Sapre - TMH
20	21-3-18	Measure of Information, Channel Capacity,	Communication Systems, By Singh & Sapre - TMH
21	23-3-18	Channel Capacity of PCM System	Communication Systems, By Singh & Sapre - TMH
22	27-3-18	Differential Pulse Code Modulation (DPCM). Delta Modulation (DM)	Communication Systems, By Singh & Sapre - TMH
23	28-3-18	Digital Modulation-ASK, FSK, PSK, DPSK	Communication Systems, By Singh & Sapre - TMH
24	3-4-18	Transmit & receive antennas, link budget, line of sight systems	Communication Systems, By Singh & Sapre - TMH
25	4-4-18	Satellite-link-GT ratio of earth stations, VSATS & GPSS	Communication Systems, By Singh & Sapre - TMH
26	6-4-18	Types of optical fibres - step, index & graded index, multi mode & single mode, attenuation & dispersion in fibres	Communication Systems, By Singh & Sapre - TMH
27	10-4-18	Optical transmitters LEDS & laser Diode, Optical Receivers-PIN & APDS, optical fiber link	Communication Systems, By Singh & Sapre - TMH
28	11-4-18	Revision of syllabus covered	

- A. Communication Systems, By Dr. Manoj Duhan I. K. International
- **B.** Electronic Communication Systems By Kennedy TMH
- C. Communication Systems, By Singh & Sapre TMH
- **Home Assignments:** 4 –5 assignments are given during the semester.

### **Evaluation Procedure**

1.	Surprise Quiz/ Tutorial Test	5 Marks
2.	Assignment / Project / Performance in the Class	5 Marks
3.	Minor Tests (Two tests having equal weightage) Minor Test I : 06 – 09 March 2018	15 Marks
	Minor Test II : 17 -20 April, 2018	
4.	Major test (University Examination)	75 Marks

Attendance Record – Candidate should attend at least75% attendance of the total classes held of the subject Chamber consultation hour: Any vacant period.

- In the semester examination, the examiner will set 08 questions in all selecting two from each unit (1 & 2 from unit I, 3 & 4 from unit II, 5 & 6 from unit III and 7 & 8 from unit IV). The students will be required to attempt only 5 questions selecting at least one question from each unit. All questions will carry equal marks.
- **2.** The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.

### **LECTURE PLAN**



**JAN. - JUNE 2018** 

SEMESTER/CLASS

**SUBJECT CODE : EE-306-B** 

**SESSIONAL MARKS: 25** 

ELECTRICAL-6TH

SUBJECT: ADVANCED MICROPROCESSOR AND MICROCONTROLLER

**DURATION OF EXAMS: 3 HOURS** 

**DEPARTMENT : EE** 

SESSION

NAME OF TEACHER : DR. PUNEET PAHUJA

**OBJECTIVES OF CONCERNED SUBJECT:** TO STUDY INTEL 8086 MICROPROCESSOR AND 8051MICROCONTROLER.

**THEORY MARKS: 75** 

OUTCOME OF CONCERNED SUBJECT: The students will be aware of 8086 microprocessor and 8051 microcontroller and their interfacing and applications.

Lecture	Lecture	TOPICS	TEXT/REFERENCE BOOKS
110.	Dates		
		UNIT-1	
1	08/01/2018	Introduction To 8086 Microprocessor, RISC And SISC Processors	B. Badri Ram, " Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
2	09/01/2018	Architecture Of 8086	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
3	10/01/2018	Pin Diagram Of 8086 And Description Of Various Signals	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
4	11/01/2018	Register Organization Of 8086	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
5	15/01/2018	Description Of Address Computations & Memory Segmentation; Segment Override	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
6	16/01/2018	Instruction Pipelining, Timing Diagrams	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
7	17/01/2018	Addressing Modes	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
8	18/01/2018	Revision	
9	23/01/2018	Test	
		UNIT-II	
10	24/01/2018	Instruction Set Of 8086	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
11	25/01/2018	Instruction Execution Timing	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill
12	29/01/2018	Instruction Format, Data Transfer Instructions, Arithmetic Instructions	B. Badri Ram, "Advanced Microprocessors And Interfacing," Tata Mcgraw Hill

13	30/01/2018	Branch Instructions, Loop Instructions, NOP	B. Badri Ram, "Advanced Microprocessors
14	21/01/2019	Flag Manipulation Instructions	B. Badri Ram, "Advanced Microprocessors
14	31/01/2018		And Interfacing," Tata Mcgraw Hill
15	01/02/2018	Logical Instructions, Shift & Rotate	B. Badri Ram, "Advanced Microprocessors And Interfacing" Tata Mcgraw Hill
16	05/00/0010	Interrupts Of 8086	B. Badri Ram, "Advanced Microprocessors
16	05/02/2018	•	And Interfacing," Tata Mcgraw Hill
17	06/02/2018	Assembly Language Programs Using 8086	B. Badri Ram, "Advanced Microprocessors
10		Assembly Language Programs Using 8086	B. Badri Ram, "Advanced Microprocessors
18	07/02/2018		And Interfacing," Tata Mcgraw Hill
19	08/02/2018	Assembly Language Programs Using 8086.	B. Badri Ram, "Advanced Microprocessors
20	12/02/2018	Revision	And interfacing, Tata Wegraw Tim
21	13/02/2018	Test	
		UNIT- III	
22	15/02/2018	The Concept Of Microcontroller	I.Scott Mackenzie, The 8051 Microcontroller
23	19/02/2018	Comparison Between Microcontrollers & Microprocessors	I.Scott Mackenzie, The 8051 Microcontroller
		Architecture And Pin Diagram Of 8051	I.Scott Mackenzie, The 8051 Microcontroller
24	20/02/2018	Microcontroller	
25	21/02/2018	Memory Organization. Special Function Registers.	I.Scott Mackenzie, The 8051 Microcontroller
26	21/02/2018	External Memory, Reset Operation	I.Scott Mackenzie, The 8051 Microcontroller
27	26/02/2018	Instruction Set	I.Scott Mackenzie, The 8051 Microcontroller
28	27/02/2018	Addressing Modes	I.Scott Mackenzie, The 8051 Microcontroller
29	28/02/2018	Arithmetic, Logical.Data Transfer.	I.Scott Mackenzie, The 8051 Microcontroller
30	01/03/2018	Boolean Variable Manipulation, Program Branching Instructions Etc	I.Scott Mackenzie, The 8051 Microcontroller
21	05/02/2018	Programs Based On	I Spott Magkanzia The 2051 Migrocontroller
51	05/05/2018	Various Instructions	1.Scott Widekenzie, The 8031 Wierocontroller
32	12/03/2018	Revision	
33	13/03/2018	Test	
		UNIT-IV	
34	14/03/2018	Timer Operation,	I.Scott Mackenzie, The 8051 Microcontroller
25	15/02/2019	Timer Mode Register, Timer Control	
35	15/03/2018	Register	1.Scott Mackenzie, The 8051 Microcontroller
36	19/03/2018	Timer Modes & Overflow Flag	I.Scott Mackenzie, The 8051 Microcontroller
37	20/03/2018	Starting, Stopping & Controlling The Timers	I.Scott Mackenzie, The 8051 Microcontroller
38	21/03/2018	Programs For Generating Square Waves Of Various Frequencies	I.Scott Mackenzie, The 8051 Microcontroller
39	26/03/2018	Serial Port Operation, UART	I.Scott Mackenzie, The 8051 Microcontroller
40	27/03/2018	Serial Port Control Register	I.Scott Mackenzie, The 8051 Microcontroller
		Modes Of Serial Port Operation, Serial Port	-,
41	28/03/2018	Baud Rate. Initialization & Programming Of Serial Port	I.Scott Mackenzie, The 8051 Microcontroller
42	02/04/2018	Interrupts Of 8051	I.Scott Mackenzie, The 8051 Microcontroller

43	03/04/2018	Sfrs Related To Interrupts	I.Scott Mackenzie, The 8051 Microcontroller
44	04/04/2018	Processing Interrupts	I.Scott Mackenzie, The 8051 Microcontroller
45	05/04/2018	Program Design Using Interrupts	I.Scott Mackenzie, The 8051 Microcontroller
46	09/04/2018	Interfacing With LED	I.Scott Mackenzie, The 8051 Microcontroller
47	10/04/2018	DC Motors, Stepper Motors	I.Scott Mackenzie, The 8051 Microcontroller
48	11/04/2018	Revision	
49	16/04/2018	Test	

#### **TEXT BOOKS:**

A. M.A.Mazidi, J.G.Mazidi, and R.D.Mckinlay, "The 8051 Microcontroller and embedded systems," Pearson.

B. Badri Ram, "Advanced Microprocessors and Interfacing," Tata McGraw Hill.

#### **REFERENCE BOOKS:**

A. Brey and Sharma, "The Intel Microprocessors: Architecture, Programming & Interfacing," PearsonB. D.V. Hall, "Microprocessors and Interfacing: Programming & Hardware," TMH.

C. I. Scott Mackenzie, The 8051 microcontroller

#### Home Assignments: 4 –5 assignments are given during the semester.

### **Evaluation Procedure**

1.	Surprise Quiz/ Tutorial Test	5 Marks
2.	Assignment / Project / Performance in the Class	5 Marks
3.	Minor Tests (Two tests having equal weightage)	15 Marks
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	Minor Test II : 17 -20 April, 2018	
4.	Major test (University Examination)	75 Marks

Attendance Record – Candidate should attend at least75% attendance of the total classes held of the subject

Chamber consultation hour: Any vacant period.

- In the semester examination, the examiner will set 08 questions in all selecting two from each unit (1 & 2 from unit I, 3 & 4 from unit II, 5 & 6 from unit III and 7 & 8 from unit IV). The students will be required to attempt only 5 questions selecting at least one question from each unit. All questions will carry equal marks.
- 2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.

### **LECTURE PLAN**



SEMESTER/CLASS

ELECTRICAL -6th

SESSION JAN. - JUNE 2018

**SUBJECT CODE : EE-310-B** 

**DURATION OF EXAMS: 3 HOURS** 

SUBJECT: EMBEDDED SYSTEMS AND APPLICATIONS

SESSIONAL MARKS: 25 THEORY MARKS: 75

NAME OF TEACHER: DR. PUNEET PAHUJA

DEPARTMENT: ELECTRICAL ENGG.

**OBJECTIVES OF CONCERNED SUBJECT:** TO GIVE STUDENTS AN OVERVIEW OF EMBEDDED SYSTEMS, MICROCONTROLLERS AND INTERFACING.

OUTCOME OF CONCERNED SUBJECT: Students will be aware of embedded systems and applications of microcontrollers.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
		LINIT I	
		INTRODUCTION	
1	08/01/2018	Different Types Of Microcontrollers	A, F, G
2	10/01/2018	Embedded Microcontrollers, External Memory Microcontrollers	A, F, G
3	11/01/2018	Processor Architectures: Harvard V/ S Princeton, CISC V/ S RISC	A, F, G
4	12/01/2018	Microcontrollers Memory Types	A, F, G
5	15/01/2018	Microcontrollers Features: Clocking, I/ O Pins,	A, F, G
6	17/01/2018	Interrupts	F,G
7	18/01/2018	Timers, Peripherals	F,G
8	19/01/2018	Introduction To Pic Microcontrollers,	F,G
9	24/01/2018	Architecture And Pipelining, Program Memoryconsiderations,	F,G
10	25/01/2018	Revision	
11	29/01/2018	Test	
		UNIT-II INTERRUPTS AND I/O PORTS:	
12	31/01/2018	Addressing Modes, Cpu Registers	F, G
13	01/02/2018	Instruction Set	F, G
14	02/02/2018	Simple Operations	F, G
15	05/02/2018	Interrupt Logic, Timer 2 Scalar Initialization,	F, G

16	07/02/2018	Intservice Interrupt Service Routine, Loop Time Subroutine	F, G
17	08/02/2018	External Interrupts And Timers	F, G
18	09/02/2018	Synchronous Serial Port Module, Serial Pheriphal Device	F, G
19	12/02/2018	O/P Port Expansion, I/P Port Expansion, UART.	F, G
20	15/02/2018	Revision	
21	16/02/2018	Test	
		UNIT-III SOETWARE:	
22	26/02/2018	Development Tools/ Environments, Assembly Language Programming Style,	C, G
23	28/02/2018	Interpreters, High Level Languages, Intel Hex Format Object Files, Debugging	C, G
24	01/03/2018	Arithmetic Operations, Bit Addressing, Loop Control, Stack Operation, Subroutines, Ram Direct Addressing, State Machines,	C, G
25	02/03/2018	Oscillators, Timer Interrupts, Memory Mapped I/O.	C, G
26	05/03/2018	Revision	
27	09/03/2018	Test	
		UNIT-IV INTERFACING WITH 8051	
28	12/03/2018	Interfacing An Lcd To The 8051, 8051 Interfacing To ADC, Sensors	C, G
29	14/03/2018	Interfacing A Stepper Motor	C, G
30	15/03/2018	8051 Interfacing To The Keyboard, Interfacing A DAC To The 8051	C, G
31	16/03/2018	8255 Interfacing With 8031/51, 8051/31 Interfacing To External Memory	C, G
32	21/03/2018	Desining Using Microcontrollers	C, G
33	26/03/2018	Music Box	C, G
34	28/03/2018	Mouse Wheel Turning	C, G
35	30/03/2018	Pwm Motor Control	C, G
36	02/04/2018	Aircraft Demonstration	C, G
37	04/04/2018	Ultra Sonic Distance Measuring	C, G
38	05/04/2018	Temperature Sensor	C, G
39	06/04/2018	Pressure Sensor	C, G
40	09/04/2018	Magnetic Field Sensor	C, G
41	11/04/2018	Revision	
42	02/04/2018	Test	
43	16/04/2018	Revision	

**TEXT BOOK:** 

A. Design with PIC Microcontrollers by John B. Peatman, Pearson.

B. Application-Specific Integrated Circuits : Michael John Sebastian Smith, pearson

**REFERENCE BOOKS:** 

- C. Programming and Customizing the 8051 Microcontroller: Predko; TMH.
- D. Designing Embedded Hardware: John Catsoulis; Shroff Pub. & Distr. ND.
- E. Programming Embedded Systems in C and C++: Michael Barr; Shroff Pub. & Distr. ND
- F. Microcontroller and Embedded Systems, Ajkaj Gupta, Katson Publications
- G. Embedded System Design, Rajeshwar Singh, Dhanpat Rai Publications

Home Assignments: 4 –5 assignments are given during the semester.

**Evaluation Procedure** 

1.	Surprise Quiz/ Tutorial Test	5 Marks
2.	Assignment / Project / Performance in the Class	5 Marks
3.	Minor Tests (Two tests having equal weightage)	15 Marks
	Minor Test I : 06 – 09 March, 2018	
	Minor Test II : 17 -20 April, 2018	
4.	Major test (University Examination)	75 Marks

Attendance Record – Candidate should attend at least75% attendance of the total classes held of the subject

Chamber consultation hour: Any vacant period.

- 1. In the semester examination, the examiner will set 08 questions in all selecting two from each unit (1 & 2 from unit I, 3 & 4 from unit II, 5 & 6 from unit III and 7 & 8 from unit IV). The students will be required to attempt only 5 questions selecting at least one question from each unit. All questions will carry equal marks.
- 2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.

### **LECTURE PLAN**



SEMESTER/CLASS	6TH		SESSION	JAN JUNE 2018
SUBJECT: CONVENTIO	NAL & CAD	OF ELECTRICAL MACHIN	ES SUBJ	ECT CODE : EE-304-B
SESSIONAL MARKS: 25	THEOR	RY MARKS: 75	DURATION C	OF EXAMS: 3 HOURS
NAME OF TEACHER: DR	. PUNEET PA	AHUJA/ MS. SHILPI	DEPARTMEN	T: ELECTRICAL ENGG.

**OBJECTIVES OF CONCERNED SUBJECT:** To provide the knowledge about the technical drawing and design of AC & DC Machines.

OUTCOME OF CONCERNED SUBJECT: Understand the basic fundamentals of computer aided designs used in field of Electrical Engineering

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS	
		UNIT:(1) - GENERAL & BASIC DESIGN PRINCIPLES		
1	8/1/18	General features electrical machine design	A.K Sawhney	
2	9/1/18	Limitations of electrical machine design	A.K Sawhney	
3	10/1/18	Types of enclosures,	A.K Sawhney	
4	12/1/18	Heat Dissipation	A.K Sawhney	
5	15/1/18	Temperature rise heating Cycles	A.K Sawhney	
6	16/1/18	Cooling cycles	A.K Sawhney	
7	17/1/18	Surprise Test		
8	19/1/18	Ratings of machine machines	A.K Sawhney	
9	23/1/18	Cooling media used	A.K Sawhney	
10	24/1/18	Output equation and output coefficient,	A.K Sawhney	
11	29/1/18	Specific Electric &	A.K Sawhney	
12	30/1/18	Magnetic Loading	A.K Sawhney	
13	31/1/18	Effect of size and ventilation	A.K Sawhney	
14	2/2/18	Revision		
15	5/2/18	Surprise Test		
		UNIT : (2) - MAGNETIC CIRCUITS		

16	6/2/18	MMF calculation for air gun and iron parts of electrical machines.	A.K Sawhney
17	7/2/18	gun and iron parts of electrical machines,	A.K Sawhney
18	9/2/18	Gap contraction coefficient.	A.K Sawhney
19	12/2/18	Real flux densities,	A.K Sawhney
20	13/2/18	Apparent flux densities	A.K Sawhney
21	16/2/18	Estimation of magnet current of rotating machines	A.K Sawhney
22	19/2/18	Surprise Test	
23	20/2/18	No load current of transformers	A.K Sawhney
24	21/2/18	No load current of induction motors	A.K Sawhney
25	26/2/18	Leakage flux calculations for transformers and rotating machines	A.K Sawhney
26	27/2/18	reactance calculations for transformers and rotating machines	A.K Sawhney
27	28/2/18	Surprise Test	
28	5/3/18	Design of field magnet.	A.K Sawhney
29	12/3/18	Revision	
		Unit-: DETAILED DESIGN	A.K Sawhney
30	13/3/18	Design of transformer and their performance calculations.	A.K Sawhney
31	14/3/18	D.C. machines, and and their performance calculations.	A.K Sawhney
32	16/3/18	Surprise Test	
33	19/3/18	induction motor and their performance calculations.	A.K Sawhney
34	20/3/18	Synchronous machine and their performance calculations.	A.K Sawhney
35	26/3/18	Surprise Test	
		UNIT: (4) COMPUTER AIDED DESIGN	
36	27/3/18	Computerization of design Procedures.	A.K Sawhney
37	28/3/18	Development of Computer program and	A.K Sawhney
38	2/4/18	performance prediction	A.K Sawhney
39	3/4/18	Optimization techniques and	A.K Sawhney
40	9/4/18	Their applications to design Problems.	A.K Sawhney
41	10/4/18	Surprise Test	
42	11/4/18	Revision	

- A. A course in Electrical Machine Design by A.K. Sawhney, Dhanpat Rai Pub.
- B. Electrical Machines: Smarajit Ghosh, Pearson

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