HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2ND **SESSION** **JAN. - JUNE 2018**

SUBJECT: MANUFACTURING PROCESS
SUBJECT CODE : ME-101-B

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER : ANKUR KAUSHIK **DEPARTMENT** : MECHANICAL

OBJECTIVES OF CONCERNED SUBJECT:

TO UNDERSTANDING OF THE BEHAVIOUR AND PROPERTY OF MATERIAL AS THEY ARE ALTERED AND INFLUENCE BY MP

OUTCOME OF CONCERNED SUBJECT:

ABILITY TO MEASURE MP VARIABLE IN A WORKSHOP AND PROCESS

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1.	15/01/2018	INTRODUCTION TO MANUFACTURING PROCESS AND THEIR CLASSIFICATION	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
2.	16/01/2018	AUTOMATION IN MANUFACTURING, INDUSTRIAL SAFETY	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
3.	23/01/2018	INTRODUCTION ,TYPES OF ACCIDENTS, CAUSES AND COMMAN SOURCES OF ACCIDENTS	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
4.	24/01/2018/	METHODS OF SAFETY	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
5.	25/01/2018	ELECTRIC SAFETY MEASURES, FIRST AID	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
6.	29/01/2018/	PLANT LAYOUT, PRINCIPAL OF PLANT LAYOUT, OBJECTIVE OF PLANT LAYOUT	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
7.	30/01//2018	TYPES OF PLANT AND SHOP LAYOUT AND THEIR ADVANTAGES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY

8.	31/01/2018	INTRODUCTION TO WELDING AND ITS CLASSIFICATION	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
9.	01/02/2018	GAS WELDING: OXY ACETYLENE WELDING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
10	05/02/2018	RESISTANCE WELDING: SPOT &SEAM	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
11.	06/02/2018	ARC WELDING : TIG &MIG	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
12.	07/02/2018	WELDING DEFECTS AND REMEDIES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
13.	08/02/2018	COMPARISONS AMONG WELDING, BRAGING. SOLDERING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
14.	12/02/2018	SURFACE FINISHING PROCESS	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
15.	13/02/2018	INTRODUCTION TO HEAT TREATMENT PROCESS	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
16.	15/02/2018	ESTIMATING MANUFACTURING COST	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
17.	19/02/2018	SHEET METAL OPERATION:MEASURING, LAYOUT, MARKING, SHEARING, PUNCHING, BLANKING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
18.	20/02/2018	PIERCING, FORMING, BENDIND AND JOINING WITH ADVANTAGES AND DISADVANTAGES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
19.	21/02/2018	HOT WORKING & COLD WORKING PROCESS, ADVANTAGES & DISADVANTAGES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
20.	26/02/2018	PRINCIPAL OF HOT WORKING PROCESS : FORGING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
21.	27/02/2018	ROLLING	WORK SHOP TECHNOLOGY VOL1 & VOL 2

22.	01/03/2018	EXTRUTION & WIRE DRAWING	WORK SHOP TECHNOLOGY VOL1 & VOL 2
23.	05/03/2018	INTRODUCTION TO MACHINE TOOL: LATHE MACHINE, DRILLING MACHINE SHAPER & PLANER, MILLING MACHINE	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
24.	06/03/2018	INTRODUCTION TO NOMENCLATURE OF SINGLE POINT CUTTING TOOL	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
25.	12/03/2018	MECHANICS OF CHIP FORMATION AND ITS TYPES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
26.	13/03/2018	USE OF COOLENT IN MACHINE AND TOOL WEAR	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
27	14/03/2018/	/GENERAL PROPERTIES & APPLICATION OF ENGG. MATERIAL	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
28	15/03/2018	MILD STEEL, MEDIUM CARBON STEEL, HIGH CARBOMN STEEL, HIGH SPEED STEEL	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
29	19/03/2018	CAST IRON	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
30	20/03/2018	NON FERROUS MATERIAL	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
31	21/03/2018	SHOP TOOL & SUPER ALLOY MATERIAL	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
32	22/03/2018	INTRODUCTION TO CASTING PROCESS AND ITS STEP	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
33	26/03/2018	PATTERN & ITS TYPES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
	27/03/2018	PATTERN ALLOWANCE	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
34	28/03/2018	RUNNER, RISER , GATES	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
35	02/04/2018	MOLDING SAND & ITS COMPOSITION , SAND PREPARATION	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
36	03/04/2018	MOLDIND METHOD, CORE SAND & CORE MAKING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
37	04/0/4/2018	CORE & MOLD ASSEMBLY	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
38	05/03/2018	CUPOLA FURNACE	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY

39	09/04/2018	POURING & FETTLING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
40	10/04/2018	CASTING DEFECTS	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY
41	11/04/2018	TESTING OF CASTING	WORK SHOP TECHNOLOGY VOL1 & VOL 2-HAZRE AND CHAUDHARY

TEXT/REFERENCE BOOKS:

A.

B.

C.

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

3.

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2nd/B.Tech **SESSION** **JAN. - JUNE 2018**

SUBJECT: PRINCIPLES OF ELECTRICAL ENGINEERING **SUBJECT CODE** : EE 101B

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER : MR. NAVEEN KUMAR **DEPARTMENT** : ELECTRICAL

OBJECTIVES OF CONCERNED SUBJECT:

This subject aims at providing knowledge of electrical basic concepts & motivates students to solve simple circuits.

OUTCOME OF CONCERNED SUBJECT:

1. **Distinguish between dc and ac circuits and analyze them.**
2. **Solve electrical networks mathematically.**
3. **Obtain basic knowledge of Measuring Instruments.**
4. **Imbibe elementary knowledge of electric machines.**

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	08/01/2018	D.C. CIRCUIT ANALYSIS: Basic Concepts Of Electric Circuits, Ohm's Law	Electrical Technology (Vol-I): B.L Theraja
2	10/01/2018	Independent Energy Sources, Dependent Energy Sources, Passive Elements, Circuit Properties	Electrical Technology (Vol-I): B.L Theraja
3	11/01/2018	Kirchoff's Laws, Applications Of Kirchoff's Laws	Electrical Technology (Vol-I): B.L Theraja
4	15/01/2018	Nodal And Loop Methods Of Analysis	Electrical Technology (Vol-I): B.L Theraja
5	17/01/2018	Superposition Theorem, Thevenin's Theorem	Electrical Technology (Vol-I): B.L Theraja
6	18/01/2018	Norton's Theorem	Electrical Technology (Vol-I): B.L Theraja
7	22/01/2018	Reciprocity Theorem, Maximum Power Transfer Theorem	Electrical Technology (Vol-I): B.L Theraja
8	25/01/2018	Millman's Theorem, Star-Delta Or Delta-Star Transformation	Electrical Technology (Vol-I): B.L Theraja
9	31/01/2018	Applications Of Network Theorems P-Spice For DC Circuit Analysis.	Electrical Technology (Vol-I): B.L Theraja
10	01/02/2018	A.C. CIRCUITS: Sinusoidal Signal, Phasors, Polar & Rectangular, Exponential & Trigonometric Representations	Electrical Technology (Vol-I): B.L Theraja
11	05/02/2018	Resistance, Inductance & Capacitance Components	Electrical Technology (Vol-I): B.L

			Theraja
12	07/02/2018	Behavior Of These Components In A.C. Circuits	Electrical Technology (Vol-I): B.L Theraja
13	08/02/2018	Phasor Relationship For Circuit Elements, Impedance & Admittance	Electrical Technology (Vol-I): B.L Theraja
14	12/02/2018	Instantaneous & Peak Values, Average And RMS Values	Electrical Technology (Vol-I): B.L Theraja
15	15/02/2018	Active Power, Reactive Power, Apparent Power	Electrical Technology (Vol-I): B.L Theraja
16	19/02/2018	Power Factor, Complex Power, Behavior Of AC Series , Parallel Circuits	Electrical Technology (Vol-I): B.L Theraja
17	21/02/2018	RC & RLC A.C. Circuits (Series And Parallel), Resonance-Series And Parallel R-L-C Circuits	Electrical Technology (Vol-I): B.L Theraja
18	26/02/2018	Q-Factor, Cut-Off Frequencies & Bandwidth.	Electrical Technology (Vol-I): B.L Theraja
19	28/02/2018	THREE PHASE CIRCUITS: Phase And Line Voltages And Currents, Balanced Star And Delta Circuits	Electrical Technology (Vol-I): B.L Theraja
20	05/03/2018	Power Equation, Measurement Of Power By Two Wattmeter Method	Electrical Technology (Vol-I): B.L Theraja
21	12/03/2018	Measuring Instruments: Principle, Construction & Working Of Moving Coil Type Voltmeter Ammeter	Electrical Technology (Vol-I): B.L Theraja
22	14/03/2018	Moving Iron Type Voltmeter & Ammeter	Electrical Technology (Vol-I): B.L Theraja
23	15/03/2018	Electrodynamic Type Wattmeter, Single-Phase Induction Type Energy Meter.	Electrical Technology (Vol-I): B.L Theraja
24	19/03/2018	TRANSFORMERS: Ampere's Law, Mutual Inductance, Construction, Working Principle And Phasor Diagrams Of Single-Phase Transformer	Electrical Technology (Vol-I): B.L Theraja
25	26/03/2018	Emf Equation, Equivalent Circuit, Testing	Electrical Technology (Vol-I): B.L Theraja
26	28/03/2018	Efficiency And Regulation Of Single-Phase Transformer, Auto Transformer.	Electrical Technology (Vol-I): B.L Theraja
27	29/03/2018	ROTATING MACHINES: Construction And Working Principle Of Dc Motor And Generator And Its Characteristics	Electrical Technology (Vol-I): B.L Theraja
28	02/04/2018	Construction And Working Principle Of 3-Phase Induction Machines	Electrical Technology (Vol-I): B.L Theraja
29	04/04/2018	3-Phase Synchronous Machines.	Electrical Technology (Vol-I): B.L Theraja
30	05/04/2018	Torque-Speed Characterstics	Electrical Technology (Vol-I): B.L Theraja
31	09/04/2018	Revision Class	Electrical Technology (Vol-I): B.L Theraja
32	11/04/2018	Revision Class	Electrical Technology (Vol-I): B.L Theraja

TEXT/REFERENCE BOOKS:

A. **Basic Electrical Engg (2nd Edition) : Kothari & Nagarath, TMH**

B. **Electrical Technology (Vol-I): B.L Theraja & A K Theraja, S.Chand**

C. **Fundamental of electrical Engineering, Rajendra Prasad, PHI, Edition 2005.**

D. **Basic Electrical Engineering, V.N Mittle & Arvind Mittal, TMH, Second Edition**

E. **Basic Electrical Engineering, S.N. Singh, PHI**

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS ECE/ME/CSE/CE/EE- 2nd **SESSION** **JAN. - JUNE 2018**

SUBJECT: Basic of Electronics (BOE) **SUBJECT CODE** : ECE102B

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER : Mr. Madhwendra Nath & Mr. Amit Banga **DEPARTMENT** : ECE

OBJECTIVES OF CONCERNED SUBJECT:

- To understand the Basics of Electronics
- To understand the devices of electronics engg.

OUTCOME OF CONCERNED SUBJECT:

The student will get the knowledge of Electronics devices

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1-5	8/01/18, 9/01/18, 10/01/18 11/01/18 15/01/18	**Semiconductor Physics, Diodes and Applications:** Basic concepts, intrinsic and extrinsic semiconductors, diffusion and drift currents ,Hall effect and its applications-pn junction under open circuit, reverse bias and forward bias conditions, p-n junction in the breakdown region, ideal diode, types of diodes –zener diode, varactor diode, LED and photodiode. Rectifier (half wave and full wave).	"Basics of Electronics" by J.B. Gupta
6-10	30/01/18, 31/01/18, 05/02/18 06/02/18 07/02/18	**Amplifiers:** Introduction of different types of BJT amplifiers & their characteristics.	"Basics of Electronics" by J.B. Gupta
11-15	07/02/18 08/02/18, 12/02/18 15/02/18 19/02/18	**Operational Amplifiers**: OP-amps, its characteristics, inverting, non-inverting, summing, averaging, scaling ,difference, integrator and differentiator amplifiers.	"Basics of Electronics" by J.B. Gupta
16-19	21/02/18	**Power Supplies:** Introduction and working of switched mode power	"Basics of Electronics" by J.B. Gupta

	21/02/18 26/02/18 01/03/18,	supply (SMPS), voltage regulator.	
20-24	05/03/18, 12/03/18, 14/03/18 14/03/18 15/03/18	**Digital Electronics:** Binary, Octal and Hexadecimal number system and conversion, Boolean algebra, truth tables of logic gates AND, OR,NOT,EX-OR,EX-NOR, NAND, NOR AND their implementation using diodes transistors, switches and lamps, Universal gates.	"Basics of Electronics" by J.B. Gupta
25-28	19/03/18, 21/03/18, 21/03/18 26/03/18	**Electronic Instruments:** Transducers, Role, importance and applications of general purpose test instruments viz. multi meter (digital and analog), cathode ray oscilloscope (CRO), function/ signal generator.	"Basics of Electronics" by J.B. Gupta
29-32	28/03/18, 28/03/18, 01/04/18 02/04/18	**Communication System:** Modulation, need of modulation, Block diagram of basic communication system, overview of AM, FM and PM.	"Basics of Electronics" by J.B. Gupta
33-37	03/04/18 04/04/18, 09/04/18 10/04/18 16/04/18	**Microprocessor:** Basics of 8085 & its architecture. Instruction set, Interrupts, Addressing modes.	"Basics of Electronics" by J.B. Gupta

Text Books :

1. "Basics of Electronics" by J.B. Gupta

Reference Books :

1. Sedra A S and Smith K C. "Microelectronic Circuits" New York.Oxford University Press, New York
2. Tocci R J and widner N S "Digital Systems" – Principles and Applications", Pearson Education India , new Delhi .
3. Cooper and Helfric, "Modern Electronic Instrumentation and Measuring Techniques". Prentice Hall of India, New Delhi.
4. Boylestad and Nashelesky, "Electronic Devices and Circuit Theory", Pearson Education India, New Delhi
5. Millman and Grabel, "Microelectronics", Tata McGraw Hill
6. Millman and Halkias, "Electronics Devices and Circuits". Tata McGraw Hill
7. Kennedy and Davis, "Electronic Communication Systems", Tata McGraw Hill
8. Ramesh S. Gaonkar, "Microprocessor Architecture,Programming,and Applications with the 8085",Penram International Publishing.

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2nd/ All Common **SESSION** **JAN. - JUNE 2018**

SUBJECT: MATHEMATICS **SUBJECT CODE : MATH-102-B**

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER : DR. GEETA JAIN **DEPARTMENT : APPLIED SCIENCE**

OBJECTIVES OF CONCERNED SUBJECT: 1. To understand the concept of complex variable ,C-R equation, harmonic function and its conjugate.

2. To understand the concept of Fourier series and its complex form.

OUTCOME OF CONCERNED SUBJECT: 1.Understand complex variable theory, Application of harmonic conjugate.

2. Expand the periodic function by using Fourier series and complex form of Fourier series.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	10/01/2018	Euler's Formula	A. Fourier Series: Higher Engg. Mathematics: B.S.GREWAL B. Advanced Engg. Mathematics by F.Krevszig
2	16/01/2018	Dirichlet Condition	
3	17/01/2018	Half Range Series	
4	23/01/2018	Half Range Series	
5	24/01/2018	Half Range Series	
6	30/01/2018	Change of interval	
7	31/01/2018	Parseval's theorem	
8	06/02/2018	Waveform	
9	07/02/2018	Taylor Laurent Seris	A. Complex Variable: Higher Engg. Mathematics: B.S.GREWAL B. Advanced Engg. Mathematics by F.Krevszig
10	20/02/2018	Residue Theorem	
11	12/02/2018	Cauchy Theorem	
12	13/03/2018	Line Integral	
13	14/03/2018	Line Integral	

		Surprise Test	
14	21/03/2018	Analytic Function	A. Complex Variable: Higher Engg. Mathematics: B.S.GREWAL B. Advanced Engg. Mathematics by F.Krevszig
15		Revision	
16	22/03/2018	Analytic Function	
17	27/03/2018	Limit, Logarithmatic and Complex Function	
18	28/03/2018	Hyperbolic Function	
19	03/04/2018	Hyperbolic Function	
20	04/04/2018	Fourier Transform	
21	10/04/2018	Fourier Transform	
22	11/04/2018	Fourier Transform	
23	13/04/2018	Revision Start	

TEXT/REFERENCE BOOKS:

A. **Differential Equation: H.T.H. Piaggio**

B. **Advanced Engg. Mathematics : R.K.Jain**

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2nd **SESSION** **JAN. - JUNE 2018**

SUBJECT: **INTRODUCTION TO COMPUTERS & PROGRAMMING**

SUBJECT CODE : **CSE-101-B**

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER : PUNEET SHARMA

DEPARTMENT : Computer Science & Engineering

OBJECTIVES OF CONCERNED SUBJECT:

To Make Students Familiar with Basic Fundamental of Computer & Programming in C. Programming is about Writing the instructions which a Computer Follows to enable it to store Knowledge, Process Knowledge and Communicate Knowledge with the outside World.

OUTCOME OF CONCERNED SUBJECT:

Subject Helps Students to have Specializations in the Programming Core in C. It Helps Students to describe and analyze the behavior of Computer Program.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1-2	8/01/2018 10/01/2018	Anatomy of a Digital Computer, different Units of Computer System, Classifications of Computer Systems	A,B
3-5	11/01/2018 15/01/2018 17/01/2018	Radix Number Systems and Conversions from one number system to another	A,B
6-7	18/01/2018 23/01/2018	Binary codes: BCD, Gray, EBCDIC, ASCII	A,B
8-10	24/01/2018 25/01/2018 25/01/2018	Operating System concepts, Operating System services, Types of Operating Systems Introduction to PC Operating Systems: Unix/Linux, DOS, Windows	A,B
11-12	29/01/2018 30/01/2018	Machine Level, Assembly Level & High Level Languages	A,B
13-14	31/01/2018 01/02/2018	Compiler, Interpreter, Assembler, Linker, Loader, Debugger	A,B

15-17	05/02/2018 07/02/2018 08/02/2018	Programming Fundamentals: Problem definition, Algorithms & Flowcharts and their symbols	A,B
18-19	12/02/2018 13/02/2018	C Fundamentals, Basic data types, local & external variables and scope	A,,B
20-21	15/02/2018 16/02/2018	formatted input/ output, operators & expressions, selection statements, loops and their applications	A,B
22	19/02/2018	Basic concepts of Computer Networks, Working of Internet and its major features	A,B
23	21/02/2018	Network Topologies: Bus, Star, Ring, Hybrid, Tree, Complete, Irregular; Types of Networks: LAN, MAN and WAN	A,B
26	26/02/2018	Pointers and Arrays	A,B,C
27	05/02/2018	Electronic Mail: advantages and disadvantages, e-mail addresses, message components, message composition, mailer features, e-mail inner workings, e-mail management	A,C
28	12/03/2018	Newsgroups, Mailing lists, Chat rooms	A,C
29	13/03/2018	Functions and Recursion	A,C
30-31	14/03/2018 15/03/2018	Strings literals, arrays of strings; applications	A,C
32	19/03/2018	Structures, Unions and Enumerations	A,C
33-34	21/03/2018 22/03/2018	Preprocessor Directives, Macro definition, Conditional compilation, Storage Classes	A,C
35-36	26/03/2018 27/03/2018	File operations (low level/high level)	A,C
37	28/03/2018	type's qualifiers, error handling	A,C
38-40	02/04/2018 04/04/2018 05/04/2018	low level programming (Bit fields in structures, other low level techniques)	A,C

TEXT/REFERENCE BOOKS:

A. **Fundamentals of Computing and C Programming, R. B. Patel, Khanna Publications, 2010.**

B. **Computer Fundamentals, Pradeep Sinha & Priti Sinha, 4th Edition, BPB Publications**

C. **The C Programming Language by Dennis M Ritchie, Brian W. Kernigham, 1988, PHI.**

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2ND **SESSION** JAN. - JUNE 2018

SUBJECT: ENGINEERING CHEMISTRY **SUBJECT CODE** : CH101B

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS:** **3 HOURS**

NAME OF TEACHER : DR. MANJU RANI **DEPARTMENT** : APPLIED SCIENCE

OBJECTIVES OF CONCERNED SUBJECT:
To Make Students Familiar with Basic Fundamental of Engineering Chemistry.

OUTCOME OF CONCERNED SUBJECT:
Subject Helps Students to have knowledge about applications of Chemistry.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1-2	11.1.2018	**Polymers and Polymerization:** Organic polymers, polymerisation, various types of polymerisation, effect of structure on properties of polymers, preparation properties and technical applications of thermoplastics (PE, PVC, PVA, Teflon),	A,B
3	12.1.2018	thermosets (PF, UF & MF)	A,B,
4	16.1.2018	and elastomers (Synthetic Rubber including SBR, Buna-S, Buna-N, Thiokol & Polyurethanes),	A,B,
5-6	18.1.2018	Inorganic polymers (general properties), Glass transition temperature, silicones	A,B,
7	19.1.2018	**Composite Materials & their application:** optical fibres, Fullerenes ,organic electronic material ,	A,B,
8	23.1.2018	composite materials & their classification, constituents of composites, role of interface in composite performance and durability,	A,B,
9-10	25.1.2018	fiber –Reinforced composite, advantage and applications of composites.	A,B,
11	30.1.2018	**Thermodynamics:** Second law, concept of entropy,	A
12-13	01.02.2018	entropy change for ideal gas, free energy and work functions, free energy change,chemical potential,	A
14	02.02.2018	Gibb's Helmholtz equation, Clausius –Clapeyron equation.	A
15	06.02.2018	Related numerical problems with above topics.	A
16-17	08.02.2018	**Phase-rule:** Terminology, Derivation of Gibb's Phase Rule equation, One component system(water system),	A

18	09.02.2018	Two components systems, system with Eutectic point (Pb-Ag),	A
19	13.02.2018	system with congruent melting point (Zn-Mg), system with incongruent melting point (Na-K),	A
20	15.02.2018	Applications of above systems. Elementary idea of Zone refining and Zone leveling.	A
21	16.02.2018	Revision	A
22	20.02.2018	**Water and its treatment**: Hardness of water and its determination, units of hardness	A, B,
23	27.02.2018	alkalinity of water and its determination, related numerical problems ,	A,B,
24	01.03.2018	Water softening, Ion-exchange process, mixed bed demineralisation,	A,B,
25	02.03.2018	desalination of water by using different methods.	A,B,
26	13.03.2018	**Corrosion and its prevention:** Galvanic & concentration cell, dry and wet corrosion, Electrochemical theory of corrosion,	A,B,
27	15.03.2018	Galvanic corrosion, Pitting corrosion , differential aeration corrosion, water line corrosion, stress corrosion,	A,B,
28	16.03.2018	factor effecting corrosion, Preventing measures, electroless Plating of Ni and Cu.	A,B,
29	20.03.2018	Revision	A
30	27.03.2018	**Lubricants and fuels:** Friction, mechanism of lubrication, classification and properties of lubricants and selection of Lubricants,	A
31-32	29.03.2018	Definition and classification of fuel, Calorific value and methods of its determination.	A
33	30.03.2018	**Analytical methods:** Thermal methods; Principle, method and application of TGA,DTA & DSC	A
34-35	03 - 05.04.2018	interaction of E.M radiation with a molecule and origin of spectrum, Vibrational & electronic spectra (Experimental details are excluded), spectrophotometry,	A
36	06.04.2018	conductometeric titrations, elementary discussion on Flame-photometery.	A
37	10.04.2018	Revision	A

TEXT/REFERENCE BOOKS:

- **A.** Engineering Chemistry, B.K. Ambaska (Laxmi Publications)
- **B.** Engineering Chemistry, Shashi Chawla (DhanpatRai and co.)
- **C.** Engineering Chemistry, P.C. Jain, Monica Jain (DhanpatRai& Co.).

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2nd **SESSION** **JAN. - JUNE 2018**

SUBJECT: Mathematics -II **SUBJECT CODE** : MATH-102B

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER : Neelu Chaudhary Department;: App Sc.Deptt.

OBJECTIVES OF CONCERNED SUBJECT:

To teach the basic concepts of mathematics to the engineering students which they can apply inn their respective branches

OUTCOME OF CONCERNED SUBJECT: The students becomes well versed with application area of the concepts taught.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	15.01.2018	Exact diff.equation	B.S.Grewal
2	18.01.2018	Eq. reducible to Exact diff.equation	B.S.Grewal
3	24.01.2018	Eq. reducible to Exact diff.equation	B.S.Grewal
4	25.01.2018	Application of diff.eqs of first order &first degree to simple electric circuits	B.S.Grewal
5	29.01.2018	Orthogonal trajectories	B.S.Grewal
6	1.02.2018	Newton's law of cooling, heat flow	B.S.Grewal
7	5.02.2018	Complete solution, complementary function &particular integral	B.S.Grewal
8	8.02.2018	Complete solution, complementary function & particular integral	B.S.Grewal
9	12.02.2018	Variation if parameters	B.S.Grewal
10	15.02.2018	Cauchys linear diff eqs	B.S.Grewal
11	19.02.2018	Legenders linear diff.eqs	B.S.Grewal
12	22.02.2018	Simultaneous linear diff.eqs with consant coefficients	B.S.Grewal

13	26.02.2018	revisions	B.S.Grewal,H.C Taneja,Mishra
14	1.03.2018	revisions	B.S.Grewal,H.C Taneja,Mishra
15	12.03.2018	Laplace transforms of elementary functions, properties existence conditions	B.S.Grewal
16	15.03.2018	Transforms of derivatives, transform of integrals, multiplication by tn	B.S.Grewal
17	19.03.2018	Division with t	B.S.Grewal
18	22.03.2018	Unit step function	B.S.Grewal
19	26.03.2018	Unit impulse & periodic function	B.S.Grewal
20	29.03.2018	Inverse transforms	B.S.Grewal
21	2.04.2018	Convolution theorem	B.S.Grewal
22	5.04.2018	Application to linear diff.equation	B.S.Grewal
23	9.04.2018	Simultaneous linear diff eqs with consant coefficent	B.S.Grewal
24	12.04.2018	Simultaneous linear diff eqs with consant coefficent	B.S.Grewal
25	16.04.2018	Revision	B.S.Grewal,H.C Taneja,Mishra

TEXT/REFERENCE BOOKS:

A. **Advanced Engg. Mathematics F kreyszig**

B. **Higher Engg.Mathematics B.S. Greewal**

C. **Higher Engg.Mathematics H.C.Taneja**

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS CE/EE/ME/ECE/CSE 2ND SEMESTER SESSION JAN. - JUNE 2018

SUBJECT PHYSICS SUBJECT CODE : PHY102B

SESSIONAL MARKS: 25 THEORY MARKS: 75 DURATION OF EXAMS: 3 HOURS

NAME OF TEACHER : MUKESH DEPARTMENT : APP. SCIENCE

OBJECTIVES OF CONCERNED SUBJECT:TO DEVELOP THEORETICAL FOUNDATION AND EXPERIMENTAL SKILLS TO STUDY NATURAL PHENOMENONA.

OUTCOME OF CONCERNED SUBJECT:STUDENTS HAVE KNOWLEDGE IN DEPTH OF PHYSICS.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1.	08/01/2018	CRYSTAL STRUCTURE	AS VASUDEVA
2	15/01/2018	CRYSTAL STRUCTURE	AS VASUDEVA
3	23/01/2018	X-RAY DIFFRACTION	AS VASUDEVA
4	29/01/2018	PLANCKS RADIATION LAW	SATYAPRAKASH
5	02/02/2018	QUANTUM MECHANICS	SATYAPRAKASH
6	05/02/2018	QUANTUM MECHANICS	SATYAPRAKASH
7	06/02/2018	FREE ELECTRON MODEL	SATYAPRAKASH
8	12/02/2018	FERMI ENERGY	SATYAPRAKASH
9	16/02/2018	RICHERDSONS EQUATION	SATYAPRAKASH
10	19/02/2018	MAXWELLS EQUATION	SP TANEJA
11	21/02/2018	WAVE EQUATION	SP TANEJA
12	27/02/2018	POYNTING VECTOR. DIELECTRIC	SP TANEJA
13	12/03/2018	KP-MODEL	SP TANEJA
14	14/03/2018	EFFECTIVE MASS, SEMICONDUTOR	SP TANEJA
15	19/03/2018	HALL EFFECT	SP TANEJA

16	21/03/2018	SUPERCONDUCTIVITY	AS VASUDEVA
17	26/03/2018	MEISSNER EFFECT, ISOTOPE EFFECT	AS VASUDEVA
18	28/03/2018	LONDONS EQUATION	AS VASUDEVA
19	02/04/2018	BCS THEORY, HTS	AS VASUDEVA
20	04/04/2018	NANO-SCIENCE	TP SINGH
21	0604/2018	CNT, QD,NEMS,MEMS	TP SINGH
22	10/04/2018	FULLERENE, GRAPHENE	TP SINGH
23	13/04/20181	APPLICATIONS OF NANOSCIENCE	

TEXT/REFERENCE BOOKS:

A. **ENGINEERING PHYSICS- SATYAPRAKASH**

B. **ENGINEERING PHYSICS- SP TANEJA**

C. **ENGINEERING PHYSICS- AS VASUDEVA**

D. **ENGINEERING PHYSICS- TP SINGH**

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 Minor Test II : 17 -20 April, 2018	15 Marks
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.

Note:

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.**

HINDU COLLEGE OF ENGINEERING, SONEPAT

LECTURE PLAN

SEMESTER/CLASS 2 **SESSION** **JAN. - JUNE 2018**

SUBJECT: **ELEMENTS OF MECHANICAL ENGG.** **SUBJECT CODE** : ME 105B

SESSIONAL MARKS: 25 **THEORY MARKS: 75** **DURATION OF EXAMS: 3 HOURS**

NAME OF TEACHER :SUKHVINDER SINGH **DEPARTMENT** : Mechanical Engineering

OBJECTIVES OF CONCERNED SUBJECT:

To understand the basic concept of mechanical engineering .

OUTCOME OF CONCERNED SUBJECT:

Ability to understand the working of basic mechanical devices as engines , boilers , turbines, power tramission devices etc.

Lecture No.	Lecture Dates	TOPICS	TEXT/REFERENCE BOOKS
1	8/1/2018	**THERMODYNAMICS-** Elementary definitions in thermodynamics,	B
2	10/1/2018	fundamentals of first and 2nd law of thermodynamic	B
3	11/1/2018	concept of internal energy, enthalpy and entropy,	B
4	12/1/2018	heat pump and refrigerator, elementary numerical problems.	B
5	15/1/2018	**PROPERTIES OF STEAM & BOILERS:** properties of steam,	A
6	17/1/2018	use of steam tables and mollier diagram, measurement of dryness fraction of steam	A
7	18/1/2018	Carnot and Rankin cycle, elementary numerical problems.	C
8	19/1/2018	Classification of boilers, Comparison of water and fire tube boilers	A
9	24/1/2018	mounting and accessories with their functions,	A
10	25/1/2018	Constructional and operational details of Cochran and Babcock and Wilcox boilers,	A
11	29/1/2018	**STEAM TURBINES AND CONDENSERS:** Classification of turbines and their working principles,	C
12	31/1/2018	Types of condensers and their uses.	C
13	01/2/2018	**I.C. ENGINES AND GAS TURBINES:** Introduction, Classification,	A

14	02/2/2018	Constructional details and working of four-stroke diesel and petrol engines	A
15	05/2/2018	Constructional details and working of Two-stroke diesel and petrol engines	A
16	07/2/2018	Efficiency of Otto & Diesel cycles ,	A
17	08/2/2018	Working principle of gas turbine, elementary numerical problems.	A
18	09/2/2018	**REFRIGERATION AND AIR CONDITIONING-** rating of refrigeration machine, coefficient of performance,	B
19	12/2/2018	simple vapor compression cycle,	B
20	15/2/2018	fundamentals of air conditioning, use of Psychrometric charts.	B
21	16/2/2018	**WATER TURBINES AND PUMPS :** Introduction, Classification, Construction details and working principle of Pelton	A
22	19/2/2018	Construction details and working principle of Francis and Kaplan turbines,	A
23	21/2/2018	Classification of water pumps	A
24	26/2/2018	construction detail & working principle of centrifugal pump.	A
25	01/3/2018	**SIMPLE LIFTING MACHINES:** Definition of machine, Velocity ratio, Mechanical advantage, Efficiency,	A
26	02/3/2018	Laws of machines, Reversibility of machine,	A
27	05/3/2018	Wheel and axle, Differential pulley block,	A
28	12/3/2018	Single, double and triple start worm and worm wheel, Single and double purchase winch crabs	A
29	14/3/2018	Simple screw jacks	A
30	15/3/2018	Compound screw jack, elementary numerical problems	A
31	16/3/2018	**INTRODUCTION TO POWER TRANSMISSION AND DEVICES:** Belt drive, Rope drive,chain drive	A
32	19/3/2018	Types of gear and Gear train,	A
33	21/3/2018	Types and function of clutches,	A
34	26/3/2018	Types and function of brakes.	A
35	28/3/2018	**STRESSES AND STRAINS:** Introduction, Concept & types of Stresses and strains, Poison's ratio	A
36	30/3/2018	, stresses and strains in simple and compound bars under axial loading	A
37	02/4/2018	Stress-strain diagrams, Hooks law	A
38	04/4/2018	Elastic constants & their relationships.	A
39	05/4/2018	Concept of shear force and bending moments in beams	A
40	06/4/2018	elementary numerical problems.	A
41	09/4/2018	Revision	A
42	11/4/2018	Revision	A
43	12/4/2018	Solution of previous year papers	A
44	16/4/2018	Solution of previous year papers	A

TEXT/REFERENCE BOOKS:

A. Elements of Mechanical Engineering – D.S. Kumar, Pub. – Kataria & Sons, New Delhi.
B. Elements of Mechanical Engineering – D.S. Kumar, Pub. – Kataria & Sons, New Delhi.
C. Thermal Engineering – D.S. Kumar, Pub. – Kataria & Sons, New Delhi.

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** **Minor Test II : 17 -20 April, 2018**	**15 Marks**
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.

Note:

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.**