Sir Visvesvaraya Institute of Technology, Nashik
Chemical Engineering Department
Teaching Plan

Academic Year: 2017-18	Semester: 6th
Course: UG	Branch: Chemical Engineering
Class : TE	Subject: Chemical Reaction Engg.-I
Subject Code: 309348	Subject Type: Theory
Name of Teacher: Dr. B.L. Pangarkar	Workload: 04 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	Subject Introduction -Type of Reaction	Dec. 2017	3	PPT
02	1.2	Rate equation and representation, order, molecularity, rate constant		3	PPT
03	1.3	Elementary and non elementary reaction & kinetic model		4	PPT
04	1.4	Kinetic model of non elementary reaction		4	PPT
05	1.5	Searching mechanism & rate controlling step		4	Chalk & Board
06	1.6	Numerical on rate, order, rate consent of reaction		4	Chalk & Board
07	1.7	Numerical	Jan. 2018	1	Chalk & Board
08	1.8	Numerical on mechanism of reaction		1	Chalk & Board
09	2.1	Constant volume batch reactor		1	PPT
10	2.2	Integral method of analysis – 1ts order, 2^{nd} order, nth order, Half life		1	PPT & Chalk & Board
11	2.3	reaction in series, reaction in parallel		2	PPT & Chalk & Board
12	2.4	Autocatalytic & reversible reactions, Differential analysis		2	PPT & Chalk & Board
13	2.5	Numerical		2	Chalk & Board
14	2.6	Numerical		2	Chalk & Board
15	2.7	Design equation of variable volume batch reactor		3	PPT & Chalk & Board
16	2.8	Numerical		3	Chalk & Board
17	3.1	Introduction, Performance eq. of Batch Reactor, CSTR, PFR		3	PPT
18	3.2	Space time and space velocity; Numerical on CSTR		3	Chalk & Board
19	3.3	Numerical on PFR		4	Chalk & Board
20	3.4	Size Comparison, series & Parallel reactor		4	PPT
21	3.5	MFR in series & parallel for equal & different sizes; Reactors of different types in series		4	PPT & Chalk & Board
22	3.6	Recycle, autocatalytic reaction;		4	PPT & Chalk &

Sir Visvesvaraya Institute of Technology, Nashik
Chemical Engineering Department

		Numerical			Board
23	3.7	Numerical	Feb.18	1	Chalk & Board
24	3.8	Numerical		1	Chalk & Board
25	4.1	Parallel and series reaction		1	PPT
26	4.2	Performance of various ideal reactor (PFR & MFR) for multiple reaction		1	Chalk & Board
27	4.3	Qualitative and Quantitative discussion for series reaction		2	PPT & Chalk & Board
28	4.4	Qualitative and Quantitative discussion for parallel reaction		2	PPT & Chalk & Board
29	4.5	Instantiations & overall fractional yield		2	Chalk & Board
30	4.6	Numerical		2	Chalk & Board
31	4.7	Numerical		3	Chalk & Board
32	4.8	Numerical		3	Chalk & Board
33	5.1	Temp. dependency from Arrhenius law, thermodynamics,		3	PPT & Chalk & Board
34	5.2	Collision & transition state theory		3	PPT & Chalk & Board
35	5.3	Comparison of theories, rate predicted by theories		4	PPT & Chalk & Board
36	5.4	Numerical		4	Chalk & Board
37	5.5	Numerical		4	Chalk & Board
38	5.6	Heat of reaction & equilibrium const. from thermodynamics		4	PPT & Chalk & Board
39	5.7	Graphical design procedure, Heat effects	March 18	1	PPT & Chalk & Board
40	5.8	Adiabatic & non-adiabatic operation		1	PPT & Chalk & Board
41	6.1	Self mixing of single fluid & two miscible units, RTD		1	PPT & Chalk & Board
42	6.2	F,C,E curve and relation between them		1	PPT & Chalk & Board
43	6.3	Numerical		3	Chalk & Board
44	6.4	Numerical		3	Chalk & Board
45	6.5	Dispersion model		3	PPT
46	6.6	Tank in series model		3	PPT
47	6.7	Segregation flow model		4	PPT
48	6.8	Numerical		4	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2.Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Dr. B.L. Pangarkar)
Subject In charge & HOD -Chemical Engg.

409341: Chemical Reaction Engineering-II

Teaching Scheme:
Lectures: 3 h / week

Examination Scheme:
In Semester: 30
End Semester: 70
Total: 100

Term I, June 2017 through Dec. 2017, Academic Year 2017-18

Lect. No.	Month	Week Dates	Name of Topic
--	JUNE	15-17	Registration SE
--			Registration TE
--			Registration BE
1		19-24	*Unit-I* : Heterogeneous Reaction: Type, Rate & contacting pattern, Fluid – Particle Reaction: Selection of model
2			Unreacted core model of spherical particle – gas diffusion & Ash layer control
3			Chemical reaction control & shrinking particle-gas diffusion
4			Application to design- solid –fluid reactor design
5		27-30	Fluidized bed with entrainment of solid fines
6			Numericals
7			Numericals
8			*Unit-II* : Fluid – fluid reaction- Kinetic regimes (case A-H)
9	JULY	3-8	Rate equations-Instantaneous & fast reaction
10			Rate equation- slow & infinite slow reaction
11			Slurry reaction kinetics and aerobic fermentation
12			Tower design- with & without mass transfer & Numericals
13		10-14	Numericals
14			Mixer settler & contacting pattern, Reactive distillation and extractive reaction
15			*Unit-III* : Adsorption- surface chemistry, Isotherm
16			BET Methods
17		17-22	Numericals
18			Void volume, solid density, pore volume distribution
19			Catalyst selection, preparation & its deactivation
20			Poisoning and regeneration
--		24-29	**UNIT TEST – 1 (24th to 26th)**
--			**UNIT TEST – 1**
--			**UNIT TEST – 1**
21			Nature and mechanism of catalytic reaction
22		31	*Unit – IV* : Gaseous diffusion in single cylindrical pore
23	August	1-4	Diffusion in liquids, in porous catalyst, surface diffusion
24			Mass transfer with reaction- Effectiveness factor of cylindrical pore
25			Effectiveness factor of spherical pore
-		8-12	IN SEM Exam Preperation
--			**INSEM Exam (8th to 12th)**
--			**INSEM Exam (8th to 12th)**

			INSEM Exam (8th to 12th)
			INSEM Exam (8th to 12th)
--			**INSEM Exam (8th to 12th)**
26		14-18	Experimental and calculated effectiveness factor
27			Selectivity for porous catalyst
28			Rates for poisoned porous catalyst
29			*Unit-V* : Rate equation of Solid catalyzed reaction
30		21-26	Experimental method for finding the rate of reaction
31			Determination of controlling resistance and rate equation
32			Numericals
33			Numericals
34		28-31	Numericals
35			Product distribution in multiple reaction
36			*Unit-VI* : Fluidized bed reactor
37			Fixed bed reactor
38	September	1	Slurry reactor
39		4-8	MM kinetics
40			Inhibition by foreign substances
--			**UNIT TEST – II (6th to 8th)**
--			**UNIT TEST – II (6th to 8th)**
--			**UNIT TEST – II (6th to 8th)**
41		11-15	Numericals
42			Numericals
-			End Sem Exam Preparation
-			End Sem Exam Preparation
-		18-23	Remedial Class
-			Remedial Class
-			Remedial Class
-			Remedial Class
-		25-29	Remedial Class
-			Remedial Class
-			Remedial Class
-			Remedial Class
	October	9-14	**Pre final Exam 9th to 14th Final**
		18	**Final submission BE & Conclusion of Teaching SE/TE/BE**

(Dr. B.L. Pangarkar)
Sub I/C & HOD

Computer Engg. Dept.

210244: Computer Organization and Architecture

Teaching Scheme:
Lectures: 4 h / week

Examination Scheme:
Online: 50 marks
End Semester: 50 marks

Total: 100

Term I, June 2017 through Dec. 2017, Academic Year 2017-18

Lect. No.	Month	Week Dates	Name of Topic
--	JUNE	15-17	Registration SE
--			Registration TE
--			Registration BE
1		19-24	**Unit-I:** Computer Organization and Architecture, Structure and Function, Evolution (a brief history) of computers, Designing for Performance,
2			Evolution of Intel processor architecture- 4 bit to 64 bit, Performance assessment.
3			A top level view of Computer function and interconnection- Computer Components,
4			Computer Function, Interconnection structure, bus interconnection,
5.		27-30	Computer Arithmetic- The Arithmetic and Logic Unit, addition and subtraction of signed numbers,
6			Design of adder and fast adder, carry look ahead addition, multiplication of positive Numbers, signed operand multiplication, booths algorithm, fast multiplication, integer division.
7			Floating point representation and operations – IEEE standard, arithmetic operations,
8			Guard bits and truncation. Assignment-I
9	JULY	3-8	**Unit-II:** Characteristics of memory system, The memory hierarchy.
10			Cache Memory- Cache memory principles
11			Elements of cache design- cache address, size, mapping functions, replacement algorithms, write policy, line size, number of cache,
12			one level and two level cache, performance Characteristics of two level cache- locality & operations.
13		10-14	Case Study- Pentium 4 cache organization.
14			Internal Memory- semiconductor main memory, advanced DRAM organization.
15			External Memory- Hard Disk organization,
16			RAID- level 1 to level 6. Assignment-II

			Design Issues- instruction level and machine parallelism, Instruction issue policy,
--			**UNIT TEST – II (6th to 8th)**
--			**UNIT TEST – II (6th to 8th)**
--			**UNIT TEST – II (6th to 8th)**
38		11-15	register renaming, machine parallelism, branch prediction,
39			Superscalar execution and implementation.
40			Case study- Pentium I1V.Assignment-V
41			**Unit-VI:** Fundamental Concepts- register transfer,
42		18-23	performing arithmetic or logic operations,
43			fetching a word from memory,
44			storing a word in memory, Execution of a complete instruction- branch instructions,
45			Hardwired control, Micro-programmed control- micro instructions, micro program sequencing,
46		25-29	wide branch addressing,
47			microinstruction with next address field,
48			pre-fetching microinstructions and emulation. Assignment-VI
49			Remedial Class
	October	9-14	**Pre final Exam 9th to 14th Final**
		18	**Final submission BE & Conclusion of Teaching SE/TE/BE**

(Prof. Dhokane R.M.)
Sub I/C

(Prof. K.N. Shedge)
HOD

(Dr. S.N. Shelke)
Principal

Computer Engg. Dept

Teaching Schedule

310244: Information Systems and Engineering Economics

Teaching Scheme:
Lectures: 3 h / week

Examination Scheme:
In Semester: 30
End Semester: 70
Total: 100

Term I, June 2017 through Dec. 2017, Academic Year 2017-18

Month	Week Dates	Name of Topic
JUNE	15-17	Registration SE
		Registration TE
		Registration BE
	19-24	**Unit-I** Role of Information Systems in Organizations,
		The Information System Manager and his challenges, Concepts of Information Systems, Information Systems and Management Strategy
		Concepts of Information Systems, I
	27-30	Case Studies - Information Systems in the Indian Railways,
		Information Systems in an e-Commerce Organization.
		Advantages & Drawbacks in an e-Commerce Organization.
JULY	3-8	Information Systems and Management Strategy
		Unit-II Managing Information Systems
		Ethical and Social Issues,
	10-14	Information Technology Infrastructure and Choices,
		Information Systems Security and Control,
		Case Studies -Information Technology Infrastructure in a Bank,
	17-22	Case Studies -Information Technology
		Infrastructure in a manufacturing / process industry.
		Unit-III Information Systems Development and Project Management
	24-29	**UNIT TEST – 1 (24th to 26th)**
		UNIT TEST – 1
		UNIT TEST – 1
August	1-4	Managing Data Resources
		Business Process Integration and Enterprise Systems
		ICT for Development and E-Governance,
	7-12	Case Studies - in-house or cloud based ERP implementation
		UIDAI Unique Identification
		Authority of India.
		INSEM Exam (11th to 19th)
		INSEM Exam (11th to 19th)
	14-18	**INSEM Exam (11th to 19th)**
		INSEM Exam (11th to 19th)
		INSEM Exam (11th to 19th)
		INSEM Exam (11th to 19th)
	21-26	**UNIT- IV** Engineering Economic Decisions,

		Time Value of Money
		Understanding Money Management
	28-31	Case Studies- Economic decisions done in Multi-national companies.
		Case Studies- Economic decisions done in Multi-national companies.
		Case Studies- Economic decisions done in Multi-national companies.
Septe mber	1	Case Studies- Economic decisions done in Multi-national companies.
	4-8	**UNIT-V** Equivalence Calculations under Inflation,
		Present-Worth Analysis,
		UNIT TEST – II (6th to 8th)
		UNIT TEST – II (6th to 8th)
		UNIT TEST – II (6th to 8th)
	11-15	Annual-Equivalence Analysis.
		Annual-Equivalence Analysis.-drawbacks
		Case Study-I-comparative analysis of software enterprises from relevant domains.
	18-23	Case Study-II-comparative analysis of software enterprises from relevant domains.
		Case Study-III-comparative analysis of software enterprises from relevant domains.
		UNIT-VI Accounting for Depreciation and Income Taxes,,, Case
	25-29	Accounting for Depreciation and Income Taxes S/W
		Project Cash-Flow Analysis
		Project Cash-Flow Analysis in various organizations
		Understanding Financial Statements, Studies - cash flow analysis done in start-up companies.
Octob er	9-14	**Pre final Exam 9th to 14th Final**
	18	**Final submission BE & Conclusion of Teaching SE/TE/BE**

(Prof. U D Butkar)
Subject I/C

(Prof. K.N Shedge)
HOD

(Dr. S.N Shelke)
Principal

Sir Visvesvaraya Institute of Technology, Nashik
Electrical Engineering Department
Teaching Plan

Academic Year: 2017-18	Semester: 4th
Course: UG	Branch: Electrical Engineering
Class : SE	Subject: Electrical Machine-I
Subject Code: **203146**	Subject Type: Theory
Name of Teacher: Prof. Kiran.P. Varade	Workload: 04 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	Single phase Transformer: Concept of ideal transformer. Corrugated core transformer. Toroidal core Transformer Useful and leakage flux,		3	Chalk & Board
02	1.2	Effects. Resistance, leakage reactance and leakage impedance of transformer windings.		3	Chalk & Board
03	1.3	Voltage regulation.	Dec. 2017	4	Chalk & Board
04	1.4	Exact and approximate equivalent circuits referred to L.V. and H. V. side of the transformer		4	Chalk & Board
05	1.5	Phase diagrams for no-load and on load conditions. Transformer ratings		4	PPT & Chalk & Board
06	1.6	Losses in a transformer, their variation with load, voltage & Frequency on no load losses		4	PPT & Chalk & Board
07	1.7	Efficiency and condition for maximum efficiency.		1	Chalk & Board
08	1.8	Autotransformers, their ratings and applications.		1	Chalk & Board
09	2.1	Polarity test. Parallel operation of single phase transformers, Welding Transformer		1	PPT
10	2.2	Three Phase Transformers: Standard connections of three phase transformers and their suitability for various applications,	Jan. 2018	1	PPT & Chalk & Board
11	2.3	voltage Pharos diagrams and vector groups		2	PPT & Chalk & Board
12	2.4	Descriptive treatment of Parallel operation of three phase transformers Scott connection		2	PPT & Chalk & Board
13	2.5	V connections. Three winding (tertiary windings) transformers		2	Chalk & Board
14	2.6	Open circuit and short circuit tests,		2	Chalk & Board

Sir Visvesvaraya Institute of Technology, Nashik
Electrical Engineering Department

15	2.7	two winding transformer		3	PPT & Chalk & Board
16	2.8	Losses in a transformer,		3	Chalk & Board
17	3.1	Construction, main parts, magnetic circuits, poles, yoke, field winding, armature core		3	PPT
18	3.2	Windings: Simple lap and wave winding, commentator and brush assembly. Generating action		3	Chalk & Board
19	3.3	E.M.F equation, magnetization curve, Flashing of Generator		4	Chalk & Board
20	3.4	Types of DC motors, significance of back E.M.F torque equation		4	PPT
21	3.5	Working at no-load and on-load. Losses,		4	PPT & Chalk & Board
22	3.6	Efficiency power flow diagram		4	PPT & Chalk & Board
23	3.7	Descriptive treatment of armature reaction		1	Chalk & Board
24	3.8	Generating action		1	Chalk & Board
25	4.1	Characteristics and applications of D.C. Shunt and Series Motors, Starting of DC motors		1	PPT
26	4.2	study of starters for series and shunt motor, solid state starters, speed control of various types of DC motors		1	Chalk & Board
27	4.3	Commutation: Process of commutation, time of commutation		3	PPT & Chalk & Board
28	4.4	reactance voltage, straight line commutation		3	PPT & Chalk & Board
29	4.5	commutation with variable current density, under and over commutation	Feb. 2018	3	Chalk & Board
30	4.6	bad commutation and remedies, inter poles		3	Chalk & Board
31	4.7	Compensating windings. (Descriptive treatment only)		4	Chalk & Board
32	4.8	Starting of DC motors,		4	Chalk & Board
33	5.1	Production of rotating mmf by 3-phase balanced voltage fed to a symmetrical 3-phase winding		4	PPT & Chalk & Board
34	5.2	Construction: Stator, Squirrel cage & wound rotors. Principle of working, simplified theory.		4	PPT & Chalk & Board
35	5.3	frequency of rotor emf and rotor currents, mmf produced by rotor currents, its speed w.r.t. rotor and stator mmf	March 2018	1	PPT & Chalk & Board
36	5.4	Production of torque, torque slip		1	Chalk & Board

Sir Visvesvaraya Institute of Technology, Nashik
Electrical Engineering Department

35	5.3	frequency of rotor emf and rotor currents, mmf produced by rotor currents, its speed w.r.t. rotor and stator mmf		1	PPT & Chalk & Board
36	5.4	Production of torque, torque slip relation, condition for maximum torque, torque-slip Characteristics		1	Chalk & Board
37	5.5	Effect of rotor resistance on torque-slip characteristics. Relation between starting torque, full load torque and maximum torque.		1	Chalk & Board
38	5.6	Losses in three phase induction motor, power-flow diagram		1	PPT & Chalk & Board
39	5.7	Relation between rotor input power, rotor copper loss		2	PPT & Chalk & Board
40	5.8	gross mechanical power developed, efficiency		2	PPT & Chalk & Board
41	6.1	Induction motor as a generalized transformer; pharos diagram. Exact & approximate	March 2018	2	PPT & Chalk & Board
42	6.2	Equivalent circuit. No load and blocked rotor tests to determine the equivalent circuit		2	PPT & Chalk & Board
43	6.3	Parameters and plotting the circle diagram. Computation of performance characteristics		3	Chalk & Board
44	6.4	Equivalent circuit and circle diagram. Performance curves		3	Chalk & Board
45	6.5	Necessity of starter for 3-phase induction motors.		3	PPT
46	6.6	Starters for slip-ring and cage rotor induction motors		3	PPT
47	6.7	circle diagram		4	PPT
48	6.8	Application		4	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof. Kiran.P. Varade)
Subject In charge

(Prof. N. B. Shaikh)
HOD -Electrical Engg.

H.O.D.
Dept. of Electrical Engg.
Sir. Visvesvaraya Institute of Technology
Chincholi, Nashik-422 101

Sir Visvesvaraya Institute of Technology, Nashik
Electrical Engineering Department
Teaching Plan

Academic Year: 2017-18	Semester: 6th
Course: UG	Branch: Electrical Engineering
Class : TE	Subject: Utilization of Electrical Energy
Subject Code: 303148	Subject Type: Theory
Name of Teacher: Prof. Ankita singh	Workload: 03 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching aid
01	1.1	Modes of heat transfer, mathematical expressions Electric heating: Introduction to electric heating, Advantages of electrical heating Heating methods: - Resistance heating – Direct resistance heating, indirect resistance heating, electric ovens,:	Dec. 2017	3	Chalk & Board
02	1.2	Different types of heating element materials, temperature control of resistance furnaces, and design of heating element (Numerical). Applications of resistance heating Induction heating		3	Chalk & Board
03	1.3	Principle, core type and coreless induction furnaces, Ajax Wyatt furnace, Numerical on melting furnaces Applications of induction heating,		4	Chalk & Board
04	1.4	Electric arc heating – Direct and indirect arc heating, types of arc furnaces, equivalent circuit of arc furnace, condition for maximum output,		4	Chalk & Board
05	1.5	power factor at maximum output (Numerical), Heat control in arc furnace, Applications of arc heating Dielectric heating –Principle, choice of voltage and frequency for dielectric heating (Numerical), Applications of dielectric heating Electric Welding - Welding methods–Electric arc welding and resistance welding		4	PPT & Chalk & Board
06	1.6	Equivalent circuit of arc furnace (Numerical) Modern welding		4	PPT & Chalk & Board

		techniques like ultrasonic welding and laser welding			
07	2.1	Electrochemical Process Need of electro-deposition. Applications of Faraday's laws in electro-deposition		1	PPT
08	2.2	. Factors governing electro-deposition. Objectives of electroplating, Equipments and accessories for electroplating plant, Electroplating on non-conducting materials		1	PPT & Chalk & Board
09	2.3	Principle of anodizing and its applications Electrical Circuits Used in Refrigeration,		2	PPT & Chalk & Board
10	2.4	Air Conditioning Brief description of vapour compression refrigeration cycle. Description of electrical circuits used in Refrigerator, Air Conditioner		2	PPT & Chalk & Board
11	3.1	Definitions of luminous flux, solid angle, luminous intensity, illumination, luminous efficacy, depreciation factor		3	PPT
12	3.2	coefficient of utilization, space to height ratio, reflection factor; Laws of illumination. Design of illumination schemes-Factors to be considered for design of illumination scheme,		3	Chalk & Board
13	3.3	Calculation of illumination at different points, considerations involved in simple design problems for indoor installation, illumination schemes, standard illumination level. Natural day light illumination (brief information) Different sources of light:		4	Chalk & Board
14	3.4	Incandescent lamp, fluorescent lamp, comparison between them. Incandescent and discharge lamps – their construction and characteristics; mercury vapour lamp, sodium lamp, halogen lamp, compact fluorescent lamp, metal halide lamp, neon lamps Electroluminescent lamp-LEDs, types, LASERs Comparison of all		4	PPT

		above luminaries			
15	4.1	History of Indian railways. Traction systems , Steam engine drive, Brief treatment to electric drive		1	PPT
16	4.2	diesel electric drive, types of diesel locomotives, Advantages of electric traction		1	Chalk & Board
17	4.3	Indian railway engine coding terminology, WDM,WDP,WDG series and their capacity . Introduction to metro system, mono rail system		3	PPT & Chalk & Board
18	4.4	Systems of track electrification: D.C. system, single phase low frequency A.C. system, 3 phase low frequency A.C. systems, composite systems – kando systems, single phase A.C. to dc system		3	PPT & Chalk & Board
19	4.5	D.C. system Different accessories for track electrification -overhead wires, conductor rail system, current collector-pentograph, catenary Electric locomotive- Block diagram with description of various equipment and accessories		3	Chalk & Board
20	4.6	Supply system constituents-Layout and description of -Traction substation, feeding post(25kV), feeding and sectioning arrangement, sectioning and paralleling post, neutral section. Details of major equipment in traction substation-transformer, circuit breaker, interrupter		3	Chalk & Board
21	5.1	Traction Mechanics Types of services- Urban		4	PPT & Chalk & Board
23	5.2	Sub-urban		4	PPT & Chalk & Board
24	5.3	Main line Speed time curves	March 2018	1	PPT & Chalk & Board
25	5.4	trapezoidal and quadrilateral speed-time curves		1	Chalk & Board
26	5.5	average and schedule speed (Numerical),		1	Chalk & Board
27	5.6	Tractive effort. Specific energy consumption		1	PPT & Chalk & Board
28	5.7	Factors affecting specific energy consumption (Numerical)		2	PPT & Chalk & Board
29	5.8	Mechanics of train movement,		2	PPT & Chalk & Board

		coefficient of adhesion (Numerical).			
30	6.1	Desirable characteristic of traction motors		2	PPT & Chalk & Board
31	6.2	Suitability of D.C. series motor,		2	PPT & Chalk & Board
32	6.3	A.C. series motor		3	Chalk & Board
33	6.4	3 phase induction motor and linear induction motor for traction.		3	Chalk & Board
34	6.5	Control of traction motors -Series-parallel control, Shunt and bridge transition (Numerical),		3	PPT
35	6.6	Electrical breaking, Regenerative breaking in traction, Suitability of different motors for braking.		3	PPT
36	6.7	Train lighting system. Railway signalling: - History, necessity, block system route relay interlock and necessity. Metro signalling,		4	PPT
37	6.8	Electromechanical system for route relay interlock. Introduction to train tracking system, types. Anti-collision system-brief treatment only		4	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof.Ankita singh)
Subject In charge

(Prof N.B.Shaikh)
HOD -Electrical Engg.

H.O.D.
Dept. of Electrical Engg.
Sir. Visvesvaraya Institute of Technology
Chincholi, Nashik-422 101

Sir Visvesvaraya Institute of Technology, Nashik
E & TC Engineering Department
Teaching Plan

Academic Year: 2017-18	Semester: 6th
Course: UG	Branch: E & TC Engineering
Class : TE	Subject: Business Management
Subject Code:	Subject Type: Theory
Name of Teacher: Prof. T. K. Wable	Workload: 03 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	Introduction, Definition of management characteristics of management,	Dec. 2017	3	PPT
02	1.2	functions of management:		3	PPT
03	1.3	Principles of management		4	PPT
04	1.4	Administration and management, Nature of management, levels of management		4	PPT
05	1.5	Forms of Organization- Line		4	Chalk & Board
06	1.6	Dist Business sectors & forms of business organizations		1	Chalk & Board
07	1.7	Various forms of business organizations	Jan. 2018	1	Chalk & Board
08	1.8	Concept of globalization		1	Chalk & Board
09	2.1	Definition of quality, goalpost view of quality, continuous improvement definition of quality,		2	PPT
10	2.2	Types of quality		2	PPT & Chalk & Board
11	2.3	Juran's and Demings view of quality		2	PPT & Chalk & Board
12	2.4	Quality Management Assistance Tools:		3	PPT & Chalk & Board
13	2.5	Six sigma Quality Management Standards Application of six sigma a CASE study		3	Chalk & Board
14	2.6	The ISO 9001:2015 Quality Management System Standard		3	Chalk & Board
15	3.1	Capital Structure, Fixed & working capital, Cash flow,		4	PPT
16	3.2	Demand and supply analysis		4	Chalk & Board
17	3.3	Break even analysis		4	Chalk & Board
18	3.4	Introduction to Project Management process	Feb. 2018	1	Chalk & Board
19	3.5	Project estimates and costing		1	Chalk & Board
20	3.6	Case study of a project Management		1	PPT

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E & TC Engineering Department

21	4.1	Strategic importance HRM		2	Chalk & Board
22	4.2	Human Resource Planning - objectives and process; human resource information system		2	PPT & Chalk & Board
23	4.3	Talent acquisition		2	PPT & Chalk & Board
24	4.4	career planning and management		3	Chalk & Board
25	4.5	Case study on Recent trends in Human Resource development		3	Chalk & Board
26	4.6	Case study of a HR of an organization.		3	Chalk & Board
27	5.1	**Unit V : Entrepreneurship Development** Concept of entrepreneurship		4	Chalk & Board
28	5.2	Identification of business opportunities		4	PPT & Chalk & Board
29	5.3	Sources of finance		4	PPT & Chalk & Board
30	5.4	Policies and incentives for small business development	March 2018	1	PPT & Chalk & Board
31	5.5	Woman entrepreneurship, Industrial relations		1	Chalk & Board
32	5.6	Case study on Small scale industries in India.		1	Chalk & Board
	6.1	**Unit VI : Marketing** Introduction to marketing		2	PPT & Chalk & Board
	6.2	Consumer behavior and Marketing management		2	PPT & Chalk & Board
	6.3	Marketing research		2	PPT & Chalk & Board
	6.4	Personal selling and sales force Management		3	PPT & Chalk & Board
	6.5	Modern marketing system (digital Mastering marketing)		3	PPT & Chalk & Board
	6.6	Introduction to supply chain management and customer relationship management		3	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.
3. INSEM Exam will be conduct as per schedule of University .

(Prof. T. K. Wable)
Subject In charge

Prof.U.V.Patil
HOD ETC

H.O.D.
Department of Electronics & Telecommunication Engg
SVIT., Tal. Sinnar,
Dist. Nashik

Sir Visvesvaraya Institute of Technology, Nashik
E & TC Engineering Department
Teaching Plan

Academic Year: 2017-18	Semester: 4th
Course: UG	Branch: E & TC Engineering
Class : SE	Subject: Analog Communication
Subject Code: 204189	Subject Type: Theory
Name of Teacher: Prof. T. K. Wable	Workload: 03 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	Base band & Carrier communication	Dec. 2017	3	Chalk & Board
02	1.2	Generation of AM (DSBFC) and its spectrum		3	Chalk & Board
03	1.3	Generation of DSBSC		4	Chalk & Board
04	1.4	Ring modulator & its spectrum		4	Chalk & Board
05	1.5	Modulation Index		4	Chalk & Board
06	1.6	SSBSC, ISB & VSB, their generation methods & Comparison	Jan. 2018	1	Chalk & Board
07	1.7	Block Diagram of AM Transmitter		1	Chalk & Board
08	1.8	Broadcast technical standards.		1	Chalk & Board
09	2.1	Block diagram of TRF AM Receivers		2	PPT
10	2.2	Super Heterodyne Receiver		2	PPT & Chalk & Board
11	2.3	Dual Conversion Super heterodyne Receiver		2	PPT & Chalk & Board
12	2.4	Concept of Series & Parallel resonant circuits for selectivity		3	PPT & Chalk & Board
13	2.5	Performance Characteristics		3	Chalk & Board
14	2.6	Tracking, Mixers		3	Chalk & Board
15	2.7	AM Detection: Rectifier detection, Envelope detection;		4	Chalk & Board
16	2.8	Demodulation of DSBSC: Synchronous detection; Demodulation of SSBSC: Envelope detection		4	Chalk & Board
17	3.1	Concept of Angle modulation		4	PPT
18	3.2	frequency spectrum& Eigen Values	Feb. 2018	1	Chalk & Board
19	3.3	Narrow band & wide band FM, Modulation index, Bandwidth		1	Chalk & Board
20	3.4	Phase Modulation, Bessel's Function and its mathematical analysis		1	Chalk & Board
21	3.5	Generation of FM: Direct method		2	Chalk & Board

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22	3.6	Generation of FM: Indirect Method		2	PPT
23	3.7	FM stereo Transmitter,		2	Chalk & Board
24	3.8	Two way FM Radio Transmitter,		3	Chalk & Board
25	4.1	Block diagram of FM Receiver		3	Chalk & Board
26	4.2	FM Stereo Receiver		3	PPT & Chalk & Board
27	4.3	Two way FM Radio Receiver		4	PPT & Chalk & Board
28	4.4	FM detection using Phase lock loop(PLL)		4	Chalk & Board
29	4.5	Slope detector,		4	Chalk & Board
30	4.6	Balanced Slope detector		1	Chalk & Board
31	5.1	Sources of Noise		1	Chalk & Board
32	5.2	Types of Noise		1	PPT & Chalk & Board
33	5.3	Signal to Noise Ratio		2	PPT & Chalk & Board
34	5.4	SNR of tandem connection,		2	PPT & Chalk & Board
35	5.5	Behavior of Baseband systems and Amplitude modulated systems DSBSC		2	PPT Chalk & Board
36	5.6	Behavior of Baseband systems and Amplitude modulated systems SSBSC in presence of noise.	March 2018	3	PPT Chalk & Board
37	6.1	Band limited & time limited signals		3	PPT & Chalk & Board
38	6.2	Narrowband signals and systems		3	PPT & Chalk & Board
39	6.3	Sampling theorem in time domain, Nyquist criteria		4	PPT & Chalk & Board
40	6.4	Types of sampling		4	PPT & Chalk & Board
41	6.5	Aliasing & Aperture effect		4	PPT & Chalk & Board
42	6.6	PAM PWM & PPM. Introduction to Pulse Code Modulation	April 2018	1	PPT Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.
3. ONLINE Exam will be conduct as per schedule of University

(Prof. T. K. Wable)
Subject In charge

Prof.U. V. Patil
HOD ETC

H.O.D.
Department of Electronics & Telecommunication Engg.
SVIT., Tal. Sinnar,
Dist. Nashik

Sir Visvesvaraya Institute of Technology, Nashik
Department of Information Technology
Teaching Plan

Academic Year: 2017-18	Semester: 4th
Course: UG	Branch: IT
Class : SE	Subject: FCCN
Subject Code: 214453	Subject Type: Theory
Name of Teacher: Prof. Pratibha Waje-Kashid	Workload: 04 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	**Introduction To Communication Theory:** Terminologies, Elements Of Analog Communication System, Baseband signal, Band-pass signal	Dec. 2017	3	Chalk & Board
02	1.2	Need For Modulation, Electromagnetic Spectrum And Typical Applications		3	Chalk & Board
03	1.3	Basics Of Signal (Analog And Digital,) Representation And Analysis (Time and frequency)		4	Chalk & Board
04	1.4	**Introduction To Transmission Media:** Guided Media : Twisted-Pair Cable, Coaxial Cable And Fiber-Optic Cable		4	Chalk & Board
05	1.5	Unguided Media: Wireless , Radio Waves, Microwaves And Infrared		4	PPT & Chalk & Board
06	1.6	**Noise:** External Noise, Internal Noise ,Noise Calculations		4	PPT & Chalk & Board
07	2.1	**Amplitude Modulation**, Theory Of Amplitude Modulation Techniques	Jan. 2018	1	Chalk & Board
08	2.2	DSBFC, DSBSC, SSB		1	Chalk & Board
09	2.3	Generation Of Amplitude Modulated Signals, Frequency Spectrum.		1	PPT
10	2.4	**Angle Modulation Techniques:** Theory Of Angle Modulation Techniques		1	PPT & Chalk & Board
11	2.5	Practical Issues In Frequency Modulation		2	PPT & Chalk & Board
12	2.6	Generation Of Frequency Modulation, Frequency Spectrum		2	PPT & Chalk & Board
13	3.1	**Pulse Modulation Techniques:** Pulse Analog Modulation Techniques, sampling		2	Chalk & Board
14	3.2	Pulse Digital		2	Chalk & Board

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Department of Information Technology

		Modulation Techniques: PCM, DM, DPCM, Line Coding Schemes			
15	3.3	Average Information, Entropy, Information Rate. Source coding		3	PPT & Chalk & Board
16	3.4	Shanon-Fano, Huffman and Limpel-Ziv		3	Chalk & Board
17	3.5	**Digital Modulation** Techniques: Basic Digital Modulation Schemes: ASK, FSK, And PSK		3	PPT
18	3.6	M-Ary Digital Modulation Techniques: M-Ary PSK , M-Ary FSK , M-Ary QAM		3	Chalk & Board
19	4.1	Communication Channel. Discrete And Continuous Channel, Shannon-Hartley Theorem, Channel Capacity, Nyquist And Shanon Theorem, Bandwidth S/N Trade Off.		4	Chalk & Board
20	4.2	**Error Detection And Correction** : Introduction, Block Coding (Error Detection, Error Correction		4	PPT
21	4.3	Hamming Distance And Minimum Hamming Distance), Linear Block Codes		4	PPT & Chalk & Board
22	4.4	Cyclic Codes : CRC (Hardware Implementation, Polynomials), Advantages Of Cyclic Codes		4	PPT & Chalk & Board
23	4.5	Other Cyclic Codes As Examples :CHECKSUM : One's Complement, Internet Checksum		1	Chalk & Board
24	4.6	Stop-and-Wait Automatic Repeat Request, Go-Back-N Automatic Repeat Request , Selective Repeat Automatic Repeat Request		1	Chalk & Board
25	5.1	Multiplexing :FDM, TDM, Synchronous Time-Division Multiplexing, Statistical Time-Division Multiplexing	Feb. 2018	1	PPT
26	5.2	Spread Spectrum: FHSS And DSSS		1	Chalk & Board
27	5.3	**Random access :** (ALOHA, CSMA, CSMS/CD And CSMA/ CA)		3	PPT & Chalk & Board
28	5.4	Controlled Access (Reservation, Polling And Token Passing) Channelization (FDMA, TDMA And CDMA)		3	PPT & Chalk & Board
29	5.5	Computer network fundamentals, ISO OSI Model: All Layers		3	Chalk & Board
30	5.6	TCP/IP Protocol Suite: All Layers,		3	Chalk & Board

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Department of Information Technology

		Addressing (Physical, Logical Port And Other), LAN, WAN And MAN, Network Topologies.			
31	6.1	LAN hardware: (Switches, router, hub, bridge and their types)		4	Chalk & Board
32	6.2	IEEE 802.3, Fast Ethernet (Mac Sublayer & Physical Layer)		4	Chalk & Board
33	6.3	Gigabit Ethernet (Mac Sublayer, Physical Layer) Ten-Gigabit Ethernet		4	PPT & Chalk & Board
34	6.4	Token ring and token bus standard Circuit Switched Networks		4	PPT & Chalk & Board
35	6.5	Packet (Datagram) Networks, Virtual Circuits		1	PPT & Chalk & Board
36	6.6	Structure Of Circuit And Packet Switches		1	Chalk & Board
37				1	Chalk & Board
38				1	PPT & Chalk & Board
39				2	PPT & Chalk & Board
40			March 2018	2	PPT & Chalk & Board
41				2	PPT & Chalk & Board
42				2	PPT & Chalk & Board
43				3	Chalk & Board
44				3	Chalk & Board
45				3	PPT
46				3	PPT
47				4	PPT
48				4	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof. P.V.Waje-Kashid)
Subject In charge

(Prof.R.S.Bhalerao)
HOD -IT

Sir Visvesvaraya Institute of Technology, Nashik
Department of Information Technology
Teaching Plan

Academic Year: 2017-18	Semester: 6th
Course: UG	Branch: IT
Class : TE	Subject: Design & Analysis of Algorithm
Subject Code: 314452	Subject Type: Theory
Name of Teacher: Prof. Pratibha Waje-Kashid	Workload: 04 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	**Brute Force method:** Introduction to Brute Force method & Exhaustive search	Dec. 2017	3	Chalk & Board
02	1.2	Brute Force solution to 8 queens' problem.		3	Chalk & Board
03	1.3	**Proof Techniques:** Minimum 2 examples of each: Contradiction		4	Chalk & Board
04	1.4	Mathematical Induction, Direct proofs, Proof by counterexample, Proof by contraposition.		4	Chalk & Board
05	1.5	**Analysis of Algorithm:** Efficiency-Analysis framework, asymptotic notations – big O, theta and omega.		4	PPT & Chalk & Board
06	1.6	**Amortized Analysis**: Aggregate, Accounting & Potential method with the example of stack operations		4	PPT & Chalk & Board
07	1.7	**Analysis of Non-recursive and recursive algorithms:** Solving Recurrence Equations	Jan. 2018	1	Chalk & Board
08	1.8	Homogeneous and nonhomogeneous		1	Chalk & Board
09	2.1	**Divide & Conquer:** General method, Control abstraction		1	PPT
10	2.2	Merge sort, Quick Sort – Worst, Best and average case		1	PPT & Chalk & Board
11	2.3	Binary search, Finding Max-Min, Large integer Multiplication		2	PPT & Chalk & Board
12	2.4	**Greedy Method:** General method and characteristics		2	PPT & Chalk & Board
13	2.5	Prim's method for MST		2	Chalk & Board
14	2.6	Kruskal's method for MST (using nlogn complexity)		2	Chalk & Board
15	2.7	Dijkstra's Algorithm, Optimal storage on tapes		3	PPT & Chalk & Board
16	2.8	Fractional Knapsack problem, Job Sequencing.		3	Chalk & Board

Sir Visvesvaraya Institute of Technology, Nashik
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17	3.1	General strategy,		3	PPT
18	3.2	Principle of optimality		3	Chalk & Board
19	3.3	0/1 knapsack Problem		4	Chalk & Board
20	3.4	Bellman-Ford Algorithm		4	PPT
21	3.5	Multistage Graph problem		4	PPT & Chalk & Board
22	3.6	Optimal Binary Search Trees		4	PPT & Chalk & Board
23	3.7	Travelling Salesman Problem		1	Chalk & Board
24	3.8			1	Chalk & Board
25	4.1	General method		1	PPT
26	4.2	Recursive backtracking algorithm		1	Chalk & Board
27	4.3	Iterative backtracking method		3	PPT & Chalk & Board
28	4.4	8-Queen problem		3	PPT & Chalk & Board
29	4.5	Sum of subsets	Feb. 2018	3	Chalk & Board
30	4.6	Graph coloring		3	Chalk & Board
31	4.7	Hamiltonian Cycle		4	Chalk & Board
32	4.8	0/1 Knapsack Problem		4	Chalk & Board
33	5.1	The method, Control abstractions for Least Cost Search		4	PPT & Chalk & Board
34	5.2	Bounding, FIFO branch and bound		4	PPT & Chalk & Board
35	5.3	LC branch and bound		1	PPT & Chalk & Board
36	5.4	0/1 Knapsack problem – LC branch and bound		1	Chalk & Board
37	5.5			1	Chalk & Board
38	5.6	FIFO branch and bound solution		1	PPT & Chalk & Board
39	5.7	Traveling sales person problem		2	PPT & Chalk & Board
40	5.8			2	PPT & Chalk & Board
41	6.1	**Computational Complexity:** Non Deterministic algorithms	March 2018	2	PPT & Chalk & Board
42	6.2	The classes: P, NP, NP Complete, NP Hard		2	PPT & Chalk & Board
43	6.3	Satisfiability problem		3	Chalk & Board
44	6.4	Proofs for NP Complete Problems: Clique, Vertex Cover.		3	Chalk & Board
45	6.5	**Parallel Algorithms**: Introduction		3	PPT
46	6.6	models for parallel computing		3	PPT
47	6.7	computing with complete binary tree		4	PPT
48	6.8	Pointer doubling algorithm		4	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof. P.V.Waje-Kashid)
Subject In charge

(Prof.R.S.Bhalerao)
HOD -IT

Pravara Rural Education Society's
Sir Visvesvaraya Institute of Technology, Nashik
A/P: Chincholi, Tal: Sinnar, Dist: Nashik (MH)
***Email:** svit.nashik@pravara.in, **Website:** www.svitnashik.in*
***University Id. No.** 052* ***Institute Code:** 5125*
Department of Mechanical Engineering

Teaching Plan

Academic Year: 2017-18	**Semester:** 4th
Course: UG	**Branch:** Mechanical Engineering
Class: SE	**Subject:** Theory of Machine-I
Subject Code: 202048	**Subject Type:** Theory
Name of Teacher: Prof. Khemnar V. K.	**Workload:** 04 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	---	Introduction to syllabus and Paper pattern	Dec. 2017	3	Chalk & Board
02	1.1	**Unit I Fundamentals of Kinematics and Mechanisms** Kinematic link, Types of links, Kinematic pair		3	Chalk & Board
03	1.2	Types of constrained motions, Types of Kinematic pairs, Kinematic chain, Types of joints		4	Chalk & Board
04	1.3	Mechanism, Machine, Degree of freedom (Mobility), Kutzbach criterion, Grubler's criterion. Four bar chain and its inversions, Grashoff's law		4	Chalk & Board
05	1.4	Slider crank chain and its inversions		4	PPT & Chalk & Board
06	1.5	Double slider crank chain and its inversions.		4	PPT & Chalk & Board
07	1.6	Straight line mechanisms such as: Peaucellier Mechanism, Scott Russell Mechanism, Grasshopper Mechanism, watt mechanism. Equivalent linkage of mechanisms.	Jan. 2018	1	PPT, Chalk & Board
08	1.7	Steering gear mechanisms: Condition for correct steering		1	Chalk & Board
09	1.8	Davis steering gear mechanism, Ackermann steering gear mechanism.		1	Chalk & Board
10	1.9	Numerical		1	Chalk & Board

11	2.1	**Unit II: Static and Dynamic Force Analysis** Theory and analysis of Compound Pendulum, Concept of equivalent length of simple pendulum		2	PPT & Chalk & Board
12	2.2	Bifilar suspension		2	PPT & Chalk & Board
13	2.3	Trifilar suspension		2	Chalk & Board
14	2.4	Dynamics of reciprocating engines: Two mass statically and dynamically equivalent system, correction couple		2	Chalk & Board
15	2.5	Static and dynamic force analysis of reciprocating engine mechanism		3	PPT & Chalk & Board
16	2.6	Numerical		3	Chalk & Board
17	2.7	Crank shaft torque, Introduction to T-θ diagram		3	PPT
18	2.8	Friction: Friction in turning pair, friction circle, friction axis, friction in slider crank mechanism		3	Chalk & Board
19	3.1	**Unit III: Friction Clutches, Brakes and Dynamometer** Pivot and collar friction		4	Chalk & Board
20	3.2	Cases of Pivot and collar friction		4	PPT
21	3.3	Cases of Pivot and collar friction		4	PPT & Chalk & Board
22	3.4	Classification of Clutches, torque transmitting capacity of – Single plate clutch		4	PPT & Chalk & Board
23	3.5	Torque transmitting capacity of – Multiplate plate clutch	Feb. 2018	1	Chalk & Board
24	3.6	Cone clutch and centrifugal clutch		1	PPT
25	3.7	Classification of brakes, Shoe brake		1	PPT
26	3.8	Internal shoe brake, disc brake		1	Chalk & Board
--	--	University Online Exam –SE (5th to 10th)		2	----
27	3.9	Absorption and transmission type dynamometers – prony brake, rope brake		3	PPT & Chalk & Board
28	3.10	Belt transmission, epicyclic train and Bevis-Gibson torsion		3	PPT & Chalk &

					Board
29	4.1	**Unit IV: Kinematic Analysis of Mechanisms: Analytical Method** Analytical method for displacement, velocity		3	Chalk & Board
30	4.2	Analytical method for acceleration analysis of slider crank Mechanism.		3	Chalk & Board
31	4.3	Position analysis of links with vector and complex algebra methods		4	Chalk & Board
32	4.4	Position analysis of links with vector and complex algebra methods		4	Chalk & Board
33	4.5	Loop closure equation, Chase solution		4	PPT & Chalk & Board
34	4.6	Velocity and acceleration analysis of four bar and slider crank mechanisms using vector and complex algebra methods		4	PPT & Chalk & Board
35	4.7	Hooke's joint	March 2018	1	PPT & Chalk & Board
36	4.8	Double Hooke's joint		1	Chalk & Board
37	4.9	Numerical		1	Chalk & Board
38	5.1	**Unit V: Velocity and Acceleration Analysis of Simple Mechanisms: Graphical Methods-I** Relative velocity method: Relative velocity of a point on a link, Angular velocity of a link, Sliding velocity, Velocity polygons for simple mechanisms.		1	PPT & Chalk & Board
--	--	University Online Exam –SE (5th to 10th)		2	----
39	5.2	Relative acceleration method: Relative acceleration of a point on a link, Angular acceleration of a link, Acceleration polygons for simple mechanisms.		3	PPT & Chalk & Board
40	5.3	Numerical on Relative velocity method		3	PPT & Chalk & Board
41	5.4	Numerical on Relative velocity method		3	PPT & Chalk & Board
42	5.5	Instantaneous center of rotation (ICR)		3	PPT &

		method: Definition of ICR, Types of ICRs, Methods of locating ICRs			Chalk & Board
43	5.6	Kennedy's Theorem, Body and space centrode		4	Chalk & Board
44	5.7	Numerical on ICR		4	Chalk & Board
45	5.8	Numerical on ICR	April 2018	1	PPT
46	5.9	**Unit VI: Velocity and Acceleration Analysis of Mechanisms: Graphical Methods-II** Velocity and acceleration diagrams for the mechanisms involving Coriolis component of acceleration.		1	PPT, Chalk & Board
47	5.10	Numerical		1	PPT
48	5.11	Numerical		2	Chalk & Board
49	5.12	Klein's construction		2	PPT
50	5.13	Numerical on Klein's construction		2	PPT
51	5.14	Numerical on Klein's construction		2	PPT

Note: 1. Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof. V. K. Khemnar)
Subject in charge

MECHANICAL ENGINEERING DEPT. SVIT NASHIK

(Prof. V. L. Kadlag)
HOD -Mechanical Engg.

H.O.D
DEPARTMENT OF MECHANICAL
SIR VISVESVARAYA INSTITUTE OF
TECHNOLOGY, CHINCHOLI
NASIK - 422101

Teaching Plan

302048: Design of Machine Elements – II

Teaching Scheme:
Lectures: 4 h / week
Practical: 2 h / week
Class: TE Mechanical

Examination Scheme:
In Semester: 30
End Semester: 70
OR: 25
TW:25
Total: 150

Term II, Dec. 2017 through April 2018, Academic Year 2017-18

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	**Unit-I** Gear Selection, material selection, Basic modes of tooth failure	Dec. 2017	3	PPT & Chalk & Board
02	1.2	Gear Lubrication Methods, Important terminology		3	Chalk & Board
03	1.3	Number of teeth and face width, Force analysis		4	Chalk & Board
04	1.4	Beam strength (Lewis) equation		4	Chalk & Board
05	1.5	Wear strength (Buckingham's) equation		4	Chalk & Board
06	1.6	Estimation of module based on beam and wear strength		4	Chalk & Board
07	1.7	Estimation of dynamic tooth load by velocity factor and Buckingham's equation	Jan. 2018	1	Chalk & Board
08	1.8	Miscellaneous Problems		1	Chalk & Board
09	2.1	**Unit-II** Types of helical and Bevel gears, Terminology, Virtual number of teeth		1	PPT
10	2.2	force analysis of Helical and Straight Bevel Gear		1	PPT & Chalk & Board
11	2.3	Design of Helical and Straight Bevel Gear based on Beam Strength		2	Chalk & Board
12	2.4	Design of Helical and Straight Bevel Gear based on Wear strength		2	Chalk & Board
13	2.5	estimation of effective load based on Velocity factor (Barth factor)		2	Chalk & Board
14	2.6	Buckingham's equation		2	Chalk & Board
15	2.7	Mountings of Bevel Gear		3	PPT
16	2.8	Miscellaneous Problems		3	Chalk & Board
17	3.1	**Unit-III** Types of rolling contact Bearings, Static and dynamic load carrying capacities		3	PPT
18	3.2	Stribeck's Equation		3	Chalk & Board

19	3.3	Equivalent bearing load, Load- life relationship		4	Chalk & Board
20	3.4	Selection of bearing life Selection of rolling contact bearings from manufacturer's catalog		4	PPT
21	3.5	Design for cyclic loads and speed		4	Chalk & Board
22	3.6	Design for bearing with probability of survival other than 90%		4	Chalk & Board
23	3.7	Taper roller bearing: Force analysis		1	Chalk & Board
24	3.8	Taper roller bearing: selection criteria		1	Chalk & Board
25	4.1	**Unit-IV** Worm and worm gear terminology and proportions of worm and worm gears		1	PPT
26	4.2	Force analysis of worm gear drives		1	Chalk & Board
27	4.3	Friction in Worm gears, efficiency of worm gears, Worm and worm gear material		3	Chalk & Board
28	4.4	Strength and wear ratings of worm gears	Feb. 2018	3	Chalk & Board
29	4.5	Thermal consideration in worm gear drive		3	Chalk & Board
30	4.6	Types of failures in worm gear drives		3	Chalk & Board
31	4.7	Methods of lubrication		4	Chalk & Board
32	4.8	Miscellaneous Problems		4	Chalk & Board
33	5.1	**Unit-V** Materials and construction of flat and V belts		4	PPT & Chalk & Board
34	5.2	geometric relationships for length of belt, power rating of belts, concept of slip & creep		4	Chalk & Board
35	5.3	initial tension, effect of centrifugal force, maximum power condition,		1	Chalk & Board
36	5.4	Selection of Flat and V-belts from manufacturer's catalog,		1	Chalk & Board
37	5.5	belt tensioning methods, relative advantages and limitations of Flat and V- belts		1	Chalk & Board
38	5.6	Wire Ropes: Construction, lay, selection, rope drums construction and design	March 2018	1	PPT & Chalk & Board
39	5.7	Chain Drives: Types of chains and its Geometry, selection criteria for chain drive		2	PPT & Chalk & Board
40	5.8	Chain Drives: Polygon effect of chain, Modes of failure for chain,		2	PPT & Chalk & Board

		Lubrication of chains			
41	6.1	**Unit-VI** Classification of sliding contact bearing		2	PPT & Chalk & Board
42	6.2	Lubricating oils: Properties, additives, selection of lubricating oils		2	PPT & Chalk & Board
43	6.3	Lubricating oils: Properties & selection of bearing materials.		3	Chalk & Board
44	6.4	Theory of Hydrodynamic Lubrication		3	Chalk & Board
45	6.5	2DBasic Reynolds Equation, Somerfield number, Raimondi and Boyd method		3	Chalk & Board
46	6.6	Thermal considerations, Parameters of bearing design		3	Chalk & Board
47	6.7	Length to Diameter ratio, Unit bearing Pressure		4	Chalk & Board
48	6.8	Radial Clearance, minimum oil film thickness		4	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.
2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof. Avinash S.Jejurkar)
Subject In charge

MECHANICAL ENGINEERING DEPT. SVIT NASHIK

(Prof.V.L.Kadlag)
HOD -Mechanical Engg.

H.O.D
RTMENT OF MECHANICAL ENGG
R VISVESVARAYA INSTITUTE OF
TECHNOLOGY, CHINCHOLI,
NASIK - 422101

107002: Engineering Physics

Teaching Scheme:
Lectures: 4 h / week
Practical: 2 h / week
Class: FE

Examination Scheme:
Online : 50
Theory : 50
TW : 25
Total: 125

Term II, Dec. 2017 through April 2018, Academic Year 2017-18

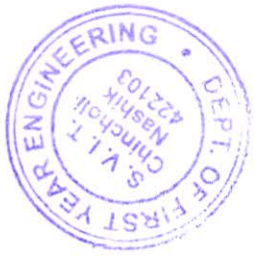
Lect. No.	Month	Week Dates	Name of Topic
--		1- 5	Registration FE
1		5	**Unit-I Interference and Diffraction**
2			Interference due to thin film derivation , fringe width
3			Formation of Newton's rings and its applications
4	Jan.	8-13	Applications of Interference , classes of diffraction
5			Fraunhofer diffraction at single slit , circular aperature
6			Plane transmission grating
7			Applications of diffraction
8			Problems
9		15-19	**Unit-II Sound Engineering (Introduction)**
10			Properties of sound
11			Sabine's formula , conditions for good acoustics
12			Noise and its types , remedies to reduce noise
13		22-31	Production of ultrasonic waves(two methods)
14			Detection of ultrasonic waves
15			Application of ultrasonic
16			Problems based on unit
--			FE Online Exam I (5-10th)
--			**Unit –III Polarization and Laser**
17		12-16	PPL, UPL , Production of PPL different methods
18			Law of Malus , Huygens theory
19			Three different cases for optic axis
20			Retardation Plates , their types
21	Feb		Application of polarization
22		19-24	Laser basic terms of laser
23			Types of laser
24			Applications of laser
		26-28	**Unit –IV Solid State Physics**
25			Electrical conductivity in conductor and semiconductor
26			Fermi energy , Fermi dirac probability function
27			Position of Fermi energy in semiconductors (derivation)
28	March	5-10	Dependence of Fermi level on temperature , doping conc.
29			Diffusion and drift current
30			Working of PN junction diode in different modes

31			NPN transistor working
32			Hall Effect and its applications
			FE Online Exam I I (12-17)
			Unit – V Wave Mechanics
33			Wave particle duality , De broglie 's hypothesis
34	March	19-24	Concept of group n phase velocity derivation
35			Heisenberg's principle and its derivation
36			Physical significance of Ψ and Ψ2
37		26-31	Schrodinger's time independent wave equation
38			Schrodinger's time dependent wave equation
39			Applications of STIWE (energy eigen value equation)
40			Tunneling effect and its applications Problems
--			**Unit –VI Superconductivity and Physics of Nano particles**
41		2-6	Properties of superconductivity
42			BCS theory , Meissner effect
43			Types of superconductors and its difference
44			Applications of superconductors and Josephson effect
45		9-17	Properties of Nanoparticles
46			Methods of synthesis of Nano particles
47			Colloidal route method
48			Applications of Nano particles
49			Practice of theory questions
--		21/4/2018	**Final submission & Conclusion of Teaching FE**

(Prof. R.B.Bhusare)
Sub I/C

(Prof. S. T. Karle)
HOD

(Dr. S.N. Shelke)
Principal



Pravara Rural Education Society's

SIR VISVESVARAYA INSTITUTE OF TECHNOLOGY,Nashik

A/P: CHINCHOLI, Tal: Sinnar, Dist: Nashik (M.S.)

Tel. No. (02551) 271278, 271179 Fax: 271277

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"Affiliated to University of Pune" letter No. CA/1379 dt. 18/08/1998

Approved by AICTE, New Delhi letter No. F-740-89-308(E)/ET/96 dtd. 15/10/1996

University I D No- 052 Institute Code 5125

Teaching Plan Div A & B

Academic Year: 2017-18	Semester: 2nd
Course: UG	Branch: First Engineering
Class : FE	Subject: Engineering Mechanics
Subject Code: 101011	Subject Type: Theory
Name of Teacher: Prof. A. G. Tambe	Workload: 04 hrs/week

Lect. No.	Unit Code	Topic Description	Expected Month	Expected week	Plan of Teaching - aid
01	1.1	Introduction & Coplanar forces	Jan. 2018	1	Chalk & Board
02	1.2	Resolution and composition		1	PPT & Chalk & Board
03	1.3	Problems on Resolution & Composition		1	Chalk & Board
04	1.4	Law of parallelogram and Problems		1	Chalk & Board
05	1.5	Moment & Varignon's Theorem & Problems		2	Chalk & Board
06	1.6	Equivalent & Equipollent System & Problems		2	Chalk & Board
07	1.7	Centre of Gravity & Problems on CG of Area and Lines		2	Chalk & Board
08		MCQ And Assignment On Unit 1		2	PPT & Chalk & Board
09	2.1	Equation of Motion & Problems		3	Chalk & Board
10	2.2	Variable Acceleration & problems		3	Chalk & Board
11	2.3	Uniform acceleration motion & Problems		3	Chalk & Board
12	2.4	Motion Under Gravity & Problems		3	Chalk & Board
13	2.5	Motion Diagrams & Problems		4	Chalk & Board
14	2.6	Dependent Motion & Problems		4	Chalk & Board
15	2.7	Relative Motion & Problems		4	Chalk & Board
16	2.8	D'Alemberts Principle & Problems		4	Chalk & Board
17		MCQ And Assignment On Unit 2	Feb. 2018	2	PPT & Chalk & Board
18	3.1	Introduction To Curvilinear Motion		3	Chalk & Board
19	3.2	Rectangular Coordinates & Problem		3	Chalk & Board
20	3.3	N & T Coordinates & Problem		3	Chalk & Board
21	3.4	Polar Coordinates & Problem		3	Chalk & Board
22	3.5	Radius of Curvature & Problem		4	Chalk & Board
23	3.6	Projectile Motion and Problems		4	Chalk & Board

24	3.7	Equation Of trajectory & Problems		4	Chalk & Board
25		MCQ And Assignment On Unit 3		4	PPT & Chalk & Board
26	4.1	Work Energy Principle		5	Chalk & Board
27	4.2	Problems on W-E Principle		5	Chalk & Board
28	4.3	Impulse Momentum Principle & Impact		5	Chalk & Board
29	4.4	Problems on I-M Principle		1	Chalk & Board
30	4.5	Theory of Impact		1	Chalk & Board
31	4.6	Problems on Impact		1	Chalk & Board
32	4.7	Coefficient of restitution & Problems		1	Chalk & Board
33		MCQ And Assignment On Unit 4	March 2018	2	PPT & Chalk & Board
34	5.1	Introduction to Equilibrium		2	Chalk & Board
35	5.2	Problems on Equilibrium of bodies		2	Chalk & Board
36	5.3	Simple Beams & Loads		2	Chalk & Board
37	5.4	Problems on simple beam		3	Chalk & Board
38	5.5	Compound Beams		3	Chalk & Board
39	5.6	Problems on Compound Beam		3	Chalk & Board
40	5.7	Space Force & Problems		3	Chalk & Board
41		Assignment No 5		4	Chalk & Board
42	6.1	Introduction to Truesses		4	Chalk & Board
43	6.2	Method of Joints & Problems		4	Chalk & Board
44	6.3	Method of section & Problems		4	Chalk & Board
45	6.4	Analysis of cables		4	Chalk & Board
46	6.5	Problems on cables		5	Chalk & Board
47	6.6	Analysis of Frames & Problems		5	Chalk & Board
48	6.7	Friction & problems		5	Chalk & Board
49		Assignment No 6		5	Chalk & Board

Note: 1.Home Assignment will be given after completion of each unit.

2. Class Test I & II will be conduct as per the schedule of Academic Calendar.

(Prof. A. G. Tambe)

Name of staff

(Prof. S. T. karle)

HOD

S.V.I.T. Chincholi Nashik 422103 DEPT. OF FIRST YEAR ENGINEERING

101: Accounting For Business Decisions

MBA-I

Teaching Scheme:
Lectures: 4 h / week

Examination Scheme:
In Semester: 30
End Semester: 50
Online: 20
Total: 100

Term I, July 2017 through Dec. 2017, Academic Year 2017-18

Lect. No.	Month	Week Dates	Name of Topic
--	July	17	Registration MBA-1.
1		17-22	**Unit-I** **Basic Concepts:** Meaning of Business decisions and importance of business decisions. Forms of business organizations, meaning of accounting, basic concepts, terms used in business accounting.
2			Types of accounts, journal, ledger and trial balance. Accounting equations and users of accounting information.
3			Accounting concepts and conventions
4			
5		24-29	Difference between financial, cost accounting and management accounting, Use and applicability of Tally in accounting
8			
9	AUGUST	31-05	**Unit-II** **Understanding of Financial Statements** . Meaning of Financial statements
11			Importance and objectives of financial statements.
13		07-12	Preparation of final accounts of sole proprietary firm
17		14-19	Making financial decisions on the basis of financial statements.
18			**Unit-III** **Cost Accounting**

19			Basic concepts of cost accounting
20			Objectives of Cost Accounting
			Classification and analysis of costs
--		21-26	Relevant and irrelevant costs
--			differential costs, sunk costs,
--			
21			Preparation of Simple Cost sheet
22		28-31	**Cost Control:**
23		1-2	Material cost control
24			
25			
26		4-9	Procurement
--			
--			Pricing of issues,
			Inventory control techniques,
			Fixation of various levels
--			material losses, Labour cost control
27		11-16	Marginal costing
28			
29	SEPTEMBER		
30			time keeping and time booking
31		18-23	Overheads, Collection
32			Classifications
33			allocation and apportionment of overheads
34			**Decision making tools**
35		25-30	Break-even point
36			Cost Volume Profit analysis
37			Optimizing product mix

38			Pricing decisions
39	OCTOBER	2-7	Budgeting
40			Cash and Flexible budgets only
41			Standard costing
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42		09-14	Material
43			Labour Variances
44			FINAL ACCOUNT
45			LIFO FIFO
	NOVEMBER	01-11(Two weeks)	**Remedial Class**
		18	**Online Exam 9th to 14th Final**
	DECEMBER		**Final submission MBA & Conclusion of Teaching of MBA.**

(Prof. Rahul Bhandari)
Sub I/C

(Prof Amol Kare)
HOD

Head of Department
Master Of Business Administration
S. V. Institute of Technology, Nashik

(Dr..N. Shelke)
Principal

Sir Visvesvaraya Institute of Technology
M.B.A.
Nashik

301:
Strategic Management
MBA-II

Teaching Scheme:
Lectures: 4 h / week

Examination Scheme:
In Semester: 30
End Semester: 50
Online: 20
Total: 100

Term I, July 2017 through Dec. 2017, Academic Year 2017-18

Lect. No.	Month	Week Dates	Name of Topic
--		17	Registration MBA-1.
1			**Unit-I** **1.1 Understanding Strategy** Concept of strategy, Corporate, Business Functional Levels of Strategy
2		17-22	**1.2 Introduction to Strategic Management:** Meaning and Characteristics of strategic management, strategic management Vs. operational management
	July		
3			**1.3 Four Phases in Strategic Management Process:** Stakeholders in business and their roles in strategic management
4			
5		24-29	**1.4 Hierarchy of Strategic Intent:** Meaning & attributes of strategic intent, Meaning of Vision, Process of envisioning, Meaning of mission, difference between vision & mission, characteristics of good mission statements
8			
9		31-05	Business definition using Abell's three dimensions, objectives and goals, Linking objectives to mission & vision. Critical success factors (CSF), Key Performance Indicators (KPI), Key Result Areas (KRA).
11	AUGUST		
13		07-12	**1.5 Analyzing Company's External Environment:** Environmental appraisal Scenario planning – Preparing an Environmental Threat and Opportunity Profile (ETOP).
17		14-19	

			Analyzing Industry Environment: Industry Analysis - Porter's Five Forces Model of competition, Entry & Exit Barriers, Strategic Group analysis
18			**Unit-II** **2.1 Analyzing Company's Internal Environment:** Resource based view of a firm, meaning, types & sources of competitive advantage, analyzing Company's Resources and Competitive Position, VRIO Framework
19			competitive parity & competitive disadvantage, Core Competence, characteristics of core competencies
20			Distinctive competitiveness, Benchmarking as a method of comparative analysis.
			2.2Value Chain Analysis Using Porter's Model: primary & secondary activities.
--		21-26	**2.3Organizational Capability Profile:** Strategic Advantage Profile,
--			Concepts of stretch, leverage & fit, ways of resource leveraging
--			
21			concentrating, accumulating, complementing, conserving, recovering
22		28-31	**2.4Portfolio Analysis:** Business Portfolio Analysis - BCG Matrix – GE 9 Cell Model
23	SEPTEMBER	1-2	**3.1 Generic Competitive Strategies:** Meaning of generic competitive
24			
25			
26		4-9	Low cost, Differentiation, Focus – when to use which strategy
--			**3.2Grand Strategies**: Stability, Growth (Diversification Strategies, Vertical Integration Strategies, Mergers, Acquisition & Takeover Strategies
--			
			Retrenchment – Turnaround,
			Divestment, Liquidation,
--			, Outsourcing Strategies
27		11-16	**4.1 Strategy Implementation:** Components of a strategic plan, barriers to implementation of strategy
28			
29			
30			Mintzberg's 5 Ps – Deliberate & Emergent Strategies , Mc Kinsey's 7s Framework

31			
32			**4.2Organization Structures for Strategy Implementation:** entrepreneurial, functional, divisional
33			, SBU, Matrix, Network structures,
34		18-23	matching structure to strategy, organizational design for stable Vs. turbulent environment
35			**4.3Changing Structures & Processes**: Reengineering & strategy implementation – Principles of Reengineering, Six Sigma
36		25-30	
37			
38			measuring, analyzing, improving
39			Management by Objectives (MBO), Total Quality Management (TQM).
40			
41		2-7	**4.5 Strategy Evaluation:** Operations Control and Strategic Control
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42			**5.1 Blue Ocean Strategy**: Difference between blue & red ocean strategies
43	OCTOBER		**5.2 Business Models:** Meaning & components of business models, new business models for Internet Economy– E-Commerce Business Models
44		09-14	**5.3 Sustainability & Strategic Management** Threats to sustainability, Integrating Social & environmental sustainability issues in strategic management, meaning of triple bottom line, people-planet-profits
45			, meaning of triple bottom line, people-planet-profits
	NOVEMBER	01-11(Two weeks)	**Remedial Class**
		18	**Online Exam 9th to 14th Final**
	DECEMBER		**Final submission MBA & Conclusion of Teaching of MBA.**

(Prof. Rahul Bhandari)
Sub I/C

(Prof.Amol Kare)
HOD

Head of Department
Master Of Business Administration
S. V. Institute of Technology, Nashik

(Dr.S.N.Shelke)
Principal

Principal
Sir Visvesvaraya Institute of Technology
Chincholi,Nasik-422102

Sir Visvesvaraya Institute of Technology
M.B.A.
Nashik