SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

EXAMINATION CIRCULAR NO.1 OF. 2019
BACHELOR OF ENGINEERING (2012 & 2015 COURSE)
Examination of OCT/NOV/DEC-2019
(Under Faculty of SCIENCE AND TECHNOLOGY : B)ENGINEERING)
INSTRUCTIONS FOR CANDIDATES

- Candidates are required to be present at the examination centre, THIRTY MINUTES before the time fixed for paper.
- Candidates are forbidden from taking any material into the examination hall, that can be used for malpractice at the time of examination.
- Candidates are requested to see the Notice Board at their place of examination regularly for changes if any, that may be notified later in the program.
- No request for any special concession such as a change in time or any day fixed for the University Examination on any ground shall be granted.
- Candidates are requested to note the Day, Date and Time of every Paper on every day.
- Candidates are permitted to use stencils at the time of examination.
- Candidates appearing for the examinations are expected to provide themselves with Side- rules.
- The exchange or loan of side-rules, drawing instruments of other materials used in the examination hall is Not Permitted while the examinations are in process. Candidates must bring their own instruments and will not be allowed to borrow from each other under any circumstances.
- Use of non-programmable battery operated electronic Calculator of Pocket-size is allowed. The exchange of Calculators is not allowed.
- The written examination will be conducted in the following order.

AUTOMOBILE

SEM-II

Day & Date	2015 Course Time-02.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Automotive Systems and Testing (416495)	Vehicle Performance And Testing. (416495)
Saturday 16/11/2019	Automotive System Design (416496)	Automotive System Design (416496)
Tuesday 19/11/2019	**ELECTIVE-III** Automotive NVH (416497A)	**ELECTIVE - III** Automotive NVH (416497A)
	ELECTIVE-III Hybrid Electric and Fuel cell Vehicle (416497B)	**ELECTIVE - III** Off Road Vehicle (416497B)
	ELECTIVE-III Automotive Hydraulics and Pneumatics (416497C)	**ELECTIVE - III** Alternative Fuels And Emission Control (416497C)
Thursday 21/11/2019	**ELECTIVE-IV** Operation Research (416498A)	**ELECTIVE - IV** Transport Management And Motor Industries (416498A)
	ELECTIVE-IV Transport Management and Motor Industries (416498B)	**ELECTIVE - IV** Operation Research (416498B)
	ELECTIVE-IV Engineering Economics and Financial Management (416498C)	

SEM-I

Day & Date	2015 Course Time-02.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	Automotive Refrigeration & Air-Conditioning (416488)	Automotive Refrigeration And Air Conditioning (416488)
Tuesday 26/11/2019	Alternative Fuels & Emission Control (416489)	Automotive Chassis And Systems (416489)
Thursday 28/11/2019	Machine & Vechile Dynamics (416490)	Machine And Vehicle Dynamics (416490)
Saturday 30/11/2019	**ELECTIVE-I** Fundamentals of Computational Fluid Dynamics (416491A)	**ELECTIVE-I** Fundamentals Of Computational Fluid Dynamics (416491A)
	ELECTIVE-I Fundamentals of Finite Element Analysis (416491B)	**ELECTIVE-I** Fundamentals Of Finite Element Analysis (416491B)
	ELECTIVE-I CAE & Automation (416491C)	**ELECTIVE-I** CAE And Automation (416491C)
Tuesday 03/12/2019	**ELECTIVE-II** Special Purpose Vechile (416492A)	**ELECTIVE-II** Hybrid And Fuel Cell Vehicle (416492A)
	ELECTIVE-II Vechile Maintenance (416492B)	**ELECTIVE-II** Automotive Materials (416492B)
	ELECTIVE-II Product Design & Development (416492C)	**ELECTIVE-II** Automotive Hydraulics And Pneumatics (416492C)

CHEMICAL

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Process Modeling and Simulation (409349)	Process Modelling & Simulation (409349)
Saturday 16/11/2019	Process Engineering Costing & Plant Design (409350)	Process Engineering Costing & Plant Design (409350)
Tuesday 19/11/2019	**ELECTIVE-III** Energy Conservation In Chemical Process Industries (409351A)	**ELECTIVE-III** Energy Conservation In Chemical Process Industries (409351A)
	ELECTIVE-III Chemical Process Safety (409351B)	**ELECTIVE-III** Chemical Process Safety (409351B)
	ELECTIVE-III Food Technology (409351C)	**ELECTIVE-III** Food Technology (409351C)
	ELECTIVE-III Advanced Materials (409351D)	**ELECTIVE-III** Advanced Materials (409351D)
Thursday 21/11/2019	**ELECTIVE-IV** Catalysis (409352A)	**ELECTIVE-IV** Catalysis (409352A)
	ELECTIVE-IV Nanotechnology (409352B)	**ELECTIVE-IV** Nanotechnology (409352B)
	ELECTIVE-IV Fuel Cell Technology (409352C)	**ELECTIVE-IV** Fuel Cell Technology (409352C)
	ELECTIVE-IV Petrochemical Engineering (409352D)	**ELECTIVE-IV** Petrochemical Engineering (409352D)

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	Process Dynamics & Control (409341)	Process Dynamics And Control (409341)
Tuesday 26/11/2019	Chemical Reaction Engineering - II (409342)	Chemical Reaction Engineering-II (409342)
Thursday 28/11/2019	Chemical Engineering Design- II (409343)	Chemical Engineering Design-II (409343)
Saturday 30/11/2019	**ELECTIVE-I** Environmental Engineering (409344A)	**ELECTIVE-I** Environmental Engineering (409344A)
	ELECTIVE-I Membrane Technology (409344B)	**ELECTIVE-I** Membrane Technology (409344B)
	ELECTIVE-I Corrosion Engineering (409344C)	**ELECTIVE-I** Corrosion Engineering (409344C)
	ELECTIVE-I Petroleum Refining (409344D)	**ELECTIVE-I** Petroleum Refining (409344D)
Tuesday 03/12/2019	**ELECTIVE-II** Chemical Process Synthesis (409345A)	**ELECTIVE-II** Chemical Process Synthesis (409345A)
	ELECTIVE-II Industrial Management & Enterpreneurship (409345B)	**ELECTIVE-II** Industrial Management And Entrepreneurship (409345B)
	ELECTIVE-II Piping Design & Engineering (409345C)	**ELECTIVE-II** Piping Design And Engineering (409345C)
	ELECTIVE-II Advanced Seperation Processes (409345D)	**ELECTIVE-II** Advance Separation Processes (409345D)

CIVIL
SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Dams and Hydraulic Structures (401007)	Dams And Hydraulic Structures (401007)
Saturday 16/11/2019	Quantity Surveying, Contracts and Tenders (401008)	Quantity Surveying cotracts And Tenders (401008)
Tuesday 19/11/2019	**ELECTIVE-III** Advanced Structural Design (401009A)	**ELECTIVE-III** Advanced Structural Design (401009A)
	ELECTIVE-III Statistical Analysis and Computational Methods in Civil Engineering (401009B)	**ELECTIVE-III** Advanced Foundation Engineering (401009B)
	ELECTIVE-III Hydropower Engineering (401009C)	**ELECTIVE-III** Hydropower Engineering (401009C)
	ELECTIVE-III Air Pollution and control (401009D)	**ELECTIVE-III** Air Pollution And Control (401009D)
	ELECTIVE-III Finite Element Method in Civil Engineering (401009E)	**ELECTIVE-III** Finite Element Method In Civil Engineering (401009E)
	ELECTIVE-III Airport and Bridge Engineering (401009F)	
Thursday 21/11/2019	**ELECTIVE-IV** Construction Management (401010A)	**ELECTIVE-IV** Construction Management (401010A)
	ELECTIVE-IV Advanced Transportation Engineering (401010B)	**ELECTIVE-IV** Advanced Transportation Engineering (401010B)
	ELECTIVE-IV Advanced foundation Engineering. (401010C)	**ELECTIVE-IV** Statistical Analysis And Computational Methods In Civil Engineering (401010C)
	ELECTIVE-IV Coastal Engineering (401010D)	**OPEN ELECTIVE** Plumbing Engineering (401010DA)
	OPEN ELECTIVE Plumbing Engineering (401010EA)	**OPEN ELECTIVE** Green Building Technology (401010DB)
	OPEN ELECTIVE Green Building Technology (401010EB)	**OPEN ELECTIVE** Ferrocement Technology (401010DC)
	OPEN ELECTIVE Ferrocement Technology (401010EC)	**OPEN ELECTIVE** Sub Sea Engineering (401010DD)
	OPEN ELECTIVE Sub sea Engineering (401010ED)	**OPEN ELECTIVE** Wave Mechanics (401010DE)
	OPEN ELECTIVE Geoinformatics (401010EE)	**OPEN ELECTIVE** Repairs and Retrofitting of Concrete Structure (401010DF)

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	Environmental Engineering - II (401001)	Environmental Engineering - II (401001)
Tuesday 26/11/2019	Transportation Engineering (401002)	Transportation Engineering (401002)
Thursday 28/11/2019	* Structural Design & Drawing-III (401003) **2.00 PM To 05.00 PM**	* Structural Design & Drawing - III (401003) **2.00 PM To 05.00 PM**
Saturday 30/11/2019	**ELECTIVE-I** Structural Design of Bridges (401004A) **ELECTIVE-I** Systems Approach in Civil Engineering (401004B) **ELECTIVE-I** Advanced Concrete Technology (401004C) **ELECTIVE-I** Architecture and Town Planning (401004D) **ELECTIVE-I** Advanced Engineering Geology with Rock Mechanics (401004E)	**ELECTIVE-I** Structural Design Of Bridges (401004A) **ELECTIVE-I** Systems Approach In Civil Engineering (401004B) **ELECTIVE-I** Advanced Concrete Technology (401004C) **ELECTIVE-I** Architecture And Town Planning (401004D) **ELECTIVE-I** Advanced Engineering Geology With Rock Mechanics (401004E)
Tuesday 03/12/2019	**ELECTIVE-II** Matrix Methods of Structural Analysis (401005A) **ELECTIVE-II** Integrated Water Resources Planning & Managment (401005B) **ELECTIVE-II** TQM & MIS in Civil Engineering (401005C) **ELECTIVE-II** Earthquake Engineering (401005D) **ELECTIVE-II** Advanced Geotechnical Engineering (401005E)	**ELECTIVE-II** Matrix Methods Of Structural Analysis (401005A) **ELECTIVE-II** Integrated Water Resources And Planning (401005B) **ELECTIVE-II** TQM & MIS In Civil Engineering (401005C) **ELECTIVE-II** Earthquake Engineering (401005D) **ELECTIVE-II** Advanced Geotechnical Engineering (401005E)

NOTE:-

*Please note the timing

COMPUTER

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Machine Learning (410250)	Software Dessign Methodology And Testing (410449)
Saturday 16/11/2019	Information and Cyber Security (410251)	High Performance Computing (410450)
Tuesday 19/11/2019	**ELECTIVE-III** Advanced Digital Signal Processing (410252A)	**ELECTIVE-III** Mobile Computing (410451A)
	ELECTIVE-III Compilers (410252B)	**ELECTIVE-III** Web Technology (410451B)
	ELECTIVE-III Embedded and Real Time Operating Systems (410252C)	**ELECTIVE-III** Cloud Computing (410451C)
	ELECTIVE-III Soft Computing and Optimization Algorithms (410252D)	**ELECTIVE-III** Cyber Security (410451D)
Thursday 21/11/2019	**ELECTIVE-IV** Software Defined Networks (410253A)	**ELECTIVE-IV** Business Analytic And Intelligence (410452A)
	ELECTIVE-IV Human Computer Interface (410253B)	**ELECTIVE-IV** Operations Research For Algorithms In Scientific Applications (410452B)
	ELECTIVE-IV Cloud Computing (410253C)	**ELECTIVE-IV** Mobile Applications (410452C)
	ELECTIVE-IV Business Intelligence (410253DA)	*** OPEN ELECTIVE** Unified Communications and Contact center Applications (410452DA)
	ELECTIVE-IV Enterprise Resourse Planning (410253DB)	**OPEN ELECTIVE** Programming Paradigms for Complex Problems –case studies in Python (410452DB)
	OPEN ELECTIVE Big Data & Data Analytics (410253DC)	**OPEN ELECTIVE** Concurrency on Open Source Systems (410452DC)
		OPEN ELECTIVE Fundamentals of Software Defined Network (410452DD)
		OPEN ELECTIVE Big Data and Data Analytics (410452DE)

Note: Common with Information Technology

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	High Performance Computing (410241)	Design & Analysis Of Algorithms (410441)
Tuesday 26/11/2019	Artificial Intelligence & Robotics (410242)	Principles Of Modern Comlpiler Design (410442)
Thursday 28/11/2019	Data Analysis (410243)	Smart System Design And Applications (410443)
Saturday 30/11/2019	**ELECTIVE-I** Digital Signal Processing (410244A)	**ELECTIVE-I** Image Processing (410444A)
	ELECTIVE-I Software Architecture & Design (410244B)	**ELECTIVE-I** Computer Network Design And Modeling (410444B)
	ELECTIVE-I Pervasive & Ubiquitous Computing (410244C)	**ELECTIVE-I** Advanced Computer Programming (410444C)
	ELECTIVE-I Data Mining & Warehousing (410244D)	**ELECTIVE-I** Data Mining Techniques And Applications (410444D)
Tuesday 03/12/2019	**ELECTIVE-II** Distributed Systems (410245A)	**ELECTIVE-II** Problem Solving With Gamification (410445A)
	ELECTIVE-II Software Testing & Quality Assurance (410245B)	**ELECTIVE-II** Pervasive Computing (410445B)
	ELECTIVE-II Operation Research (410245C)	**ELECTIVE-II** Embedded Security (410445C)
	ELECTIVE-II Mobile Communication (410245D)	**ELECTIVE-II** Multidisciplinary NLP (410445D)

ELECTRICAL

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Switchgear and Protection (403147)	Switchgear And Protection (403147)
Saturday 16/11/2019	Power Electronic Controlled Drives (403148)	Power Electronic Controlled Drives (403148)
Tuesday 19/11/2019	**ELECTIVE-III** High Voltage Engineering (403149A)	**ELECTIVE-III** High Voltage Engineering (403149A)
	ELECTIVE-III HVDC and FACTS (403149B)	**ELECTIVE-III** HVDC And FACTS (403149B)
	ELECTIVE-III Digital Control System (403149C)	**ELECTIVE-III** Digital Control System (403149C)
	ELECTIVE-III Intelligent Systems and Applications in Electrical Engineering (403149D)	**ELECTIVE-III** Intelligent Systems And Its Applications In Electrical Engineering (403149D)
	ELECTIVE-III Analog Electronics and Sensing Technology [Open Elective] (403149E)	
Thursday 21/11/2019	**ELECTIVE-IV** Smart Grid (403150A)	**ELECTIVE-IV** Smart Grid (403150A)
	ELECTIVE-IV Robotics and Automation (403150B)	**ELECTIVE-IV** Robotics And Automation (403150B)
	ELECTIVE-IV Illumination Engineering (403150C)	**ELECTIVE-IV** Illumination Engineering (403150C)
	ELECTIVE-IV VLSI Design[Open Elective] (403150D)	**OPEN ELECTIVE** VLSI Design (403150D)

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	Power System Operation & Control (403141)	Power System Operation And Control (403141)
Tuesday 26/11/2019	PLC & SCADA Applications (403142)	PLC And SCADA Applications (403142)
Thursday 28/11/2019	Control System-II (403145)	Control System - II (403145)
Saturday 30/11/2019	**ELECTIVE-I** Fundamentals of Microcontroller & its Applications (403143A)	**ELECTIVE-I** Special Purpose Machines (403143A)
	ELECTIVE-I Power Quality (403143B)	**ELECTIVE-I** Power Quality (403143B)
	ELECTIVE-I Renewable Energy System (403143C)	**ELECTIVE-I** Renewable Energy Systems (403143C)
	ELECTIVE-I Digital Signal Processing (403143D)	**ELECTIVE-I** Digital Signal Processing (403143D)
Tuesday 03/12/2019	**ELECTIVE-II** Restructuring & De Regulation (403144A)	**ELECTIVE-II** Restructuring And Deregulation (403144A)
	ELECTIVE-II Electromagnetic Field (403144B)	**ELECTIVE-II** Electromagnetic Fields (403144B)
	ELECTIVE-II EHV AC Transmission (403144C)	**ELECTIVE-II** EHV AC Transmission (403144C)
	ELECTIVE-II Electric & Hybrid Vehicles (403144D)	**ELECTIVE-II** Introduction To Electrical Transportation Systems (403144D)
	ELECTIVE-II Special Purpose Machines (403144E)	

ELECTRONICS

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Computer Networks & Security (404209)	Computer Network (404209)
Saturday 16/11/2019	Process Instrumentation (404210)	Process Automation (404210)
Tuesday 19/11/2019	**ELECTIVE-III** Automotive Electronics (404211A)	**ELECTIVE-III** Speech & Audio Signal Processing (404211A)
	ELECTIVE-III Artificial Intelligence and Machine Learning (404211B)	**ELECTIVE-III** Audio And Video Engineering (404211B)
	ELECTIVE-III Optical and Microwave Communication (404211C)	**ELECTIVE-III** Optical And Microwave Communication (404211C)
	ELECTIVE-III Audio Video Engineering (404211D)	**ELECTIVE-III** Soft Computing (404211D)
	ELECTIVE-III Testing and verification for SoC Design (404211E)	
Thursday 21/11/2019	**ELECTIVE-IV** Robotics (404212A)	**ELECTIVE-IV** Biomedical Signal Processing (404212A)
	ELECTIVE-IV Wireless Sensor Networks (404212B)	**ELECTIVE-IV** Nano Electronics & MEMS (404212B)
	ELECTIVE-IV Renewable Energy Systems & DSM (404212C)	**ELECTIVE-IV** System On Chip (404212C)
	ELECTIVE-IV TM4C123GH6PM Microcontroller (404212D)	**ELECTIVE-IV** Mechatronics (404212D)
	OPEN ELECTIVE * Advanced Automotive Electronics (404192DA)	**OPEN ELECTIVE** * Advanced Automotive Electronics (404212EA)
	OPEN ELECTIVE * Industrial Internet of Things (404192DB)	**OPEN ELECTIVE** * Data Science and Analytics (404212EB)
	OPEN ELECTIVE * Programmable System on Chip (404192DC)	**OPEN ELECTIVE** * Industrial Internet of Things (404212EC)
	OPEN ELECTIVE * Data Science & Analytics (404192DD)	

Note : Common with E&TC

SEM-I

Day & Date	2015 Course Time-02.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	VLSI Design (404201)	VLSI Design (404201)
Tuesday 26/11/2019	Advnaced Power Electronics (404202)	Electronic System Design (404202)
Thursday 28/11/2019	Electronics System Design (404203)	Advance Power Electronics (404203)
Saturday 30/11/2019	**ELECTIVE-I** Digital Image & Video Processing (404204A)	**ELECTIVE-I** Image Processing And Machine Vision (404204A)
	ELECTIVE-I Audio & Speech Processing (404204B)	**ELECTIVE-I** Embedded Systems And RTOS (404204B)
	ELECTIVE-I Embedded Systems & RTOS (404204C)	**ELECTIVE-I** Biomedical Instrumentation (404204C)
	ELECTIVE-I Internet of Things (404204D)	**ELECTIVE-I** Advance Measurement Systems (404204D)
	ELECTIVE-I Software Defined Radio (404204E)	
Tuesday 03/12/2019	**ELECTIVE-II** Mobile Communication (404205A)	**ELECTIVE-II** DSP Processors (404205A)
	ELECTIVE-II Bio-Medical Electronics (404205B)	**ELECTIVE-II** Robotics And Automation (404205B)
	ELECTIVE-II Optimization Techniques (404205C)	**ELECTIVE-II** Electronics In Agriculture (404205C)
	ELECTIVE-II Computer Modeling & Simulation (404205D)	**ELECTIVE-II** Mobile Communication (404205D)
	ELECTIVE-II Digital Signal Processor TMS320C67X (404205E)	

ELECTRONICS & TELECOMMUNICATION

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Mobile Communication (404189)	Mobile Communication (404189)
Saturday 16/11/2019	Broadband Communication Systems (404190)	Broadband Communication Systems (404190)
Tuesday 19/11/2019	**ELECTIVE-III** Machine Learning (404191A)	**ELECTIVE-III** Speech & Audio Signal Processing (404191A)
	ELECTIVE-III PLC s and Automation (404191B)	**ELECTIVE-III** RF Circuit Design (404191B)
	ELECTIVE-III Audio and Speech Processing (404191C)	**ELECTIVE-III** Audio Video Engineering (404191C)
	ELECTIVE-III Software Defined Radio (404191D)	**ELECTIVE-III** Soft Computing (404191D)
	ELECTIVE-III Audio Video Engineering (404191E)	
Thursday 21/11/2019	**ELECTIVE-IV** Robotics (404192A)	**ELECTIVE-IV** Biomedical Signal Processing (404192A)
	ELECTIVE-IV Biomedical Electronics (404192B)	**ELECTIVE-IV** Nano Electronics & MEMS (404192B)
	ELECTIVE-IV Wireless Sensor Networks (404192C)	**ELECTIVE-IV** Detection & Estimation Theory (404192C)
	ELECTIVE-IV Renewable Energy Systems (404192D)	**ELECTIVE-IV** Wireless Networks (404192D)
	OPEN ELECTIVE Advanced Automotive Electronics (404192DA)	**OPEN ELECTIVE** Advanced Automotive Electronics (404192EA)
	OPEN ELECTIVE Industrial Internet of Things (404192DB)	**OPEN ELECTIVE** *Unified Communications and Contact center Applications (404192EB)
	OPEN ELECTIVE Programmable System on Chip (404192DC)	**OPEN ELECTIVE** @Business Analytic And Intelligence (404192EC)
	OPEN ELECTIVE Data Science & Analytics (404192DD)	**OPEN ELECTIVE** Data Science and Analytics (404192ED)
		OPEN ELECTIVE Industrial Internet of Things (404192EE)

NOTE:-

Common with Information Techonology

@ Common with Computer

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	VLSI Design & Technology (404181)	VLSI Design & Technology (404181)
Tuesday 26/11/2019	Computer Networks & Security (404182)	Computer Networks (404182)
Thursday 28/11/2019	Radiation & Microwave Techniques (404183)	Microwave Engineering (404183)
Saturday 30/11/2019	**ELECTIVE-I** Digital Image video Processing (404184A)	**ELECTIVE-I** Digital Image Processing (408184A)
	ELECTIVE-I Industrial Drives & Control (404184B)	**ELECTIVE-I** Embedded Systems & RTOS (408184B)
	ELECTIVE-I Embedded System & RTOS (404184C)	**ELECTIVE-I** Software Defined Radio (408184C)
	ELECTIVE-I Internet of Things (404184D)	**ELECTIVE-I** Industrial Drives And Control (408184D)
Tuesday 03/12/2019	**ELECTIVE-II** Wavelets (412185A)	**ELECTIVE-II** Multi Rate & Adaptive Signal Processing (412185A)
	ELECTIVE-II Electronics Product Design (412185B)	**ELECTIVE-II** Electronic Product Design (412185B)
	ELECTIVE-II Optimization Techniques (412185C)	**ELECTIVE-II** PLCs And Automation (412185C)
	ELECTIVE-II Artificial Intelligence (412185D)	**ELECTIVE-II** Artificial Intelligence (412185D)
	ELECTIVE-II Electronics in Agriculture (412185E)	

INFORMATION TECHNOLOGY

SEM-II

Day & Date	2015 Course Time-02.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Distributed Computing System (414462)	Distributed System (414461)
Saturday 16/11/2019	Ubiquitous Computing (414463)	Advanced Databases (414462)
Tuesday 19/11/2019	**ELECTIVE-III** Internet of Things (IoT) (414464A)	**ELECTIVE-III** Mobile Computing (414463A)
	ELECTIVE-III Information storage and retrieval (414464B)	**ELECTIVE-III** Advanced Graphics And Animation (414463B)
	ELECTIVE-III Multimedia Techniques (414464C)	**ELECTIVE-III** Information Storage And Retrieval (414463C)
	ELECTIVE-III Internet and Web Programming (414464D)	**ELECTIVE-III** IT Enabled Services (414463D)
	ELECTIVE-III Computational Optimization (414464E)	**ELECTIVE-III** Advanced Computer Networks (414463E)
Thursday 21/11/2019	**ELECTIVE-IV** Rural Technologies and Community Development (414465A)	**ELECTIVE-IV** Bio-Informatics (414464A)
	ELECTIVE-IV Parallel Computing (414465B)	**ELECTIVE-IV** Real Time And Embedded Systems (414464B)
	ELECTIVE-IV Computer Vision (414465C)	**ELECTIVE-IV** Green IT-Principles And Practices (414464C)
	ELECTIVE-IV Social Media Analytics (414465D)	**ELECTIVE-IV** Internet Of Things (414464D)
		OPEN ELECTIVE Unified Communications and Contact center Applications (414464E)

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	Information & Cyber Security (414453)	Information And Cyber Security (414453)
Tuesday 26/11/2019	Machine Learning & Applications (414454)	Software Modeling And Design (414454)
Thursday 28/11/2019	Software Design & Modeling (414455)	Machine Learning (414455)
Saturday 30/11/2019	**ELECTIVE-I** Wireless Communications (414456A)	**ELECTIVE-I** Soft Computing (414456A)
	ELECTIVE-I Natural Language Processing (414456B)	**ELECTIVE-I** Usability Engineering (414456B)
	ELECTIVE-I Usability Engineering (414456C)	**ELECTIVE-I** Modern Compiler (414456C)
	ELECTIVE-I Multicore & Concurrent Systems (414456D)	**ELECTIVE-I** Parallel Algorithms And Design (414456D)
	ELECTIVE-I Business Analytics & Intelligence (414456E)	**ELECTIVE-I** Cloud Computing (414456E)
Tuesday 03/12/2019	**ELECTIVE-II** Software Defined Networks (414457A)	**ELECTIVE-II** Business Intelligence (414457A)
	ELECTIVE-II Soft Computing (414457B)	**ELECTIVE-II** Service Oriented Architecture (414457B)
	ELECTIVE-II Software Testing & Quality Assurance (414457C)	**ELECTIVE-II** E&M Governance (414457C)
	ELECTIVE-II Compiler Construction (414457D)	**ELECTIVE-II** Geo Informatics Systems (414457D)
	ELECTIVE-II Gamification (414457E)	**ELECTIVE-II** Natural Language Processing (414457E)

INSTRUMENTATION & CONTROL

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Process Instrumentation (406268)	Process Instrumentation- II (406267)
Saturday 16/11/2019	Industrial Automation (406269)	Industrial Automation (406268)
Tuesday 19/11/2019	**ELECTIVE-III** Building Automation (406270A)	**ELECTIVE-III** Digital Image Processing (406269A)
	ELECTIVE-III Robotics and Automation (406270B)	**ELECTIVE-III** Building Automation- II (406269B)
	ELECTIVE-III Environmental Instrumentation (406270C)	**ELECTIVE-III** Process Modelling & Optimization (406269C)
	ELECTIVE-III Digital Image Processing (406270D)	**ELECTIVE-III** Virtual Instrumentation (406269D)
	ELECTIVE-III Process Modelling and Optimization (406270E)	**ELECTIVE-III** Computer Techniques And Applications (406269E)
Thursday 21/11/2019	**ELECTIVE-IV** Reliability Engineering (406271A)	**ELECTIVE-IV** Smart Material And Systems (406270A)
	ELECTIVE-IV Renewable Energy Systems (406271B)	**ELECTIVE-IV** Instrumentation In Agriculture And Food Processing (406270B)
	ELECTIVE-IV Instrumentation in Agriculture and Food Industries (406271C)	**ELECTIVE-IV** Neural Network And Fuzzy Logic Control (406270C)
	ELECTIVE-IV Smart Material and Systems (406271D)	**ELECTIVE-IV** Automobile Instrumentation (406270D)

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	Process Dynamics & Control (406261)	Process Instrumentation- I (406261)
Tuesday 26/11/2019	Project Engineering & Management (406262)	Project Engineering & Management (406262)
Thursday 28/11/2019	Computer Techniques & Applications (406263)	Digital Control (406263)
Saturday 30/11/2019	**ELECTIVE-I** Industrial Internet of Things (406264A)	**ELECTIVE-I** Advanced Bio-Medical Instrumentation (406264A)
	ELECTIVE-I Electrical Drives (406264B)	**ELECTIVE-I** Building Automation- I (406264B)
	ELECTIVE-I Advanced Digital Signal Processing (406264C)	**ELECTIVE-I** Advanced Control Systems (406264C)
	ELECTIVE-I Advanced Bio-Medical Instrumentation (406264D)	**ELECTIVE-I** Advanced Sensors (406264D)
	ELECTIVE-I Digital Control Systems (406264E)	**ELECTIVE-I** Advanced Digital Signal Processing (406264E)
Tuesday 03/12/2019	**ELECTIVE-II** Smart & Wireless Instrumentation (406265A)	**ELECTIVE-II** Opto- Electronics Instrumentation (406265A)
	ELECTIVE-II Instrumentation & Control for Power Plants (406265B)	**ELECTIVE-II** Environmental Instrumentation (406265B)
	ELECTIVE-II Automotive Instrumentation (406265C)	**ELECTIVE-II** Robotics & Automation (406265C)
	ELECTIVE-II Opto-Electronics Instrumentation (406265D)	**ELECTIVE-II** Sensor Networks (406265D)
	ELECTIVE-II Soft Computing (406265E)	**ELECTIVE-II** Fault Detection And Diagnosis (406265E)

MECHANICAL

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	Energy Engineering (402047)	Power Plant Engineering (402047)
Saturday 16/11/2019	* Mechanical System Design (402048) **2.00 PM To 05.00 PM**	*Mechanical System Design (402048) **2.00 PM To 05.00 PM**
Tuesday 19/11/2019	**ELECTIVE-III** Tribology (402049A)	**ELECTIVE-III** Refrigeration And Air Conditioning Equipment Design (402049A)
	ELECTIVE-III Industrial Engineering (402049B)	**ELECTIVE-III** Robotics (402049B)
	ELECTIVE-III Robotics (402049C)	**ELECTIVE-III** Industrial Engineering (402049C)
		ELECTIVE-III (OPEN ELECTIVE) Product Lifecycle Management (402049DA)
		ELECTIVE-III (OPEN ELECTIVE) Automobile Engineering (402049DB)
		ELECTIVE-III (OPEN ELECTIVE) Steam Engineering and Energy Conservations (402049DC)
Thursday 21/11/2019	**ELECTIVE-IV** Advanced Manufacturing Processes (402050A)	**ELECTIVE-IV** Computational Fluid Dynamics (402050A)
	ELECTIVE-IV Solar & Wind Energy (402050B)	**ELECTIVE-IV** Finite Element Analysis (402050B)
	ELECTIVE-IV Product Design and Development (402050C)	**ELECTIVE-IV** Design Of Pumps Blowers And Compressors (402050C)

NOTE:-

*** Please Note The Timing**

SEM-I

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Saturday 23/11/2019	@ Refrigeration and Air Conditioning (302049)	Refrigeration And Air Conditioning (402041)
	Hydraulics & Pneumatics (402041)	
Tuesday 26/11/2019	CAD/CAM Automation (402042)	CAD/CAM Automation (402042)
Thursday 28/11/2019	Dynamics of Machinery (402043)	Dynamics Of Machinery (402043)
Saturday 30/11/2019	**ELECTIVE-I** Finite Element Analysis (402044A)	**ELECTIVE-I** Energy Audit Management (402044A)
	ELECTIVE-I Computational Fluid Dynamics (402044B)	**ELECTIVE-I** Tribology (402044B)
	ELECTIVE-I Heating Ventilation & Air Conditioning (402044C)	**ELECTIVE-I** Reliability Engineering (402044C)
		ELECTIVE-I Machine Tool Design (402044D)
Tuesday 03/12/2019	**ELECTIVE-II** Automobile Engineering (402045A)	**ELECTIVE-II** Gas Turbine Propulsion (402045A)
	ELECTIVE-II Operation Research (402045B)	**ELECTIVE-II** Product Design And Development (402045B)
	ELECTIVE-II Energy Audit & Management (402045C)	**ELECTIVE-II** Operation Research (402045C)
		ELECTIVE-II Advanced Manufacturing Processes (402045D)

NOTE:-

@ The Students who have not studied the subject Refrigeration & Air Conditioning in T.E. 2012 pattern and who got admitted in B.E. 2015 pattern.

MECHANICAL-SANDWICH

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Thursday 14/11/2019	** Energy Engineering (402047)	Mechanical Vibrations (402066)
Saturday 16/11/2019	** Mechanical System Design (402048) **2.00 PM To 05.00 PM**	** Mechanical System Design (402048) **2.00 PM To 05.00 PM**
Tuesday 19/11/2019	Mechanical Vibrations (402066)	Industrial Hydraulics And Pneumatics (402067)
Thursday 21/11/2019	**ELECTIVE-I** Computational Fluid Dynamics (402068A)	**ELECTIVE-I** Refrigeration And Air Conditioning (402068 A)
	ELECTIVE-I CAD/ CAM Automation (402068B)	**ELECTIVE-I** Computational Fluid Dynamics (402068 B)
	ELECTIVE-I Finite Element Analysis (402068C)	**ELECTIVE-I** Design Of Pumps, Blowers & Compressors (402068 C)
	ELECTIVE-I Hydraulics and Pneumatics (402068D)	**ELECTIVE-I** CAD / CAM Automation (402068 D)
Saturday 23/11/2019	**ELECTIVE-II** Energy Audit and Management (402069A)	**ELECTIVE-II** Energy Audit And Management (402069 A)
	ELECTIVE-II Operations Research (402069B)	**ELECTIVE-II** Operations Research (402069 B)
		ELECTIVE-II Robotics (402069 C)
		ELECTIVE-II Tribology (402069 D)

NOTE:-

*** Common to Mechanical Engineering*

SEM-I

Day & Date	2015 Course Time-2.00 PM To 05.00 PM	2012 Course Time-02.00 PM To 05.00 PM
Tuesday 03/12/2019	Automobile Engineering (Self-Study-III) (402064)	Automobile Engineering (Self Study-III) (402064)
Thursday 05/12/2019	Plant Engineering and Maintenance (Self- Study-III) (402065)	Power Plant Engineering (Self Study-IV) (402065)

Ganeshkhind, Pune - 411 007

Ref.No/XCT/1268

Date:09/10/2019   **Director**

Board of Examinations And Evaluation