SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)



EXAMINATION CIRCULAR NO.205 OF. 2019 BACHELOR OF ENGINEERING (2012 & 2015 COURSE)

Examination of APR/MAY-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 Pocketsize is allowed. The exchange of Calculators is not allowed.
- The written examination will be conducted in the following order.

APR/MAY-2019 Page 1 of 23

AUTOMOBILE

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 04/05/2019	Automotive Refrigreration & Air- Conditioning (416488)	Automotive Refrigeration And Air Conditioning (416488)
Thursday 09/05/2019	Alternative Fuels & Emission Control (416489)	Automotive Chassis And Systems (416489)
Saturday 11/05/2019	Machine & Vechile Dynamics (416490)	Machine And Vehicle Dynamics (416490)
	ELECTIVE-I Fundamentals of Computational Fluid Dynamics (416491A)	ELECTIVE-I Fundamentals Of Computational Fluid Dynamics (416491A)
Tuesday 14/05/2019	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)
	ELECTIVE-II Special Purpose Vechile (416492A)	ELECTIVE-II Hybrid And Fuel Cell Vehicle (416492A)
Thursday 16/05/2019	ELECTIVE-II Vechile Maintenance (416492B)	ELECTIVE-II Automotive Materials (416492B)
	ELECTIVE-II Product Design & Development (416492C)	ELECTIVE-II Automotive Hydraulics And Pneumatics (416492C)

APR/MAY-2019 Page 2 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Automotive Systems and Testing (416495)	Vehicle Performance And Testing. (416495)
Wednesday 22/05/2019	Automotive System Design (416496)	Automotive System Design (416496)
	ELECTIVE-III Automotive NVH (416497A)	ELECTIVE - III Automotive NVH (416497A)
Friday 24/05/2019	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)
	ELECTIVE-IV Operation Research (416498A)	ELECTIVE - IV Transport Management And Motor Industries (416498A)
Monday 27/05/2019	ELECTIVE-IV Transport Management and Motor Industries (416498B)	ELECTIVE - IV Operation Research (416498B)
	ELECTIVE-IV Engineering Economics and Financial Management (416498C)	

APR/MAY-2019 Page 3 of 23

CHEMICAL

SEM-I

Day & Date	2015 Course	2012 Course
1	Time-02.00 PM To 04.30 PM	Time-02.00 PM To 04.30 PM
Saturday 04/05/2019	Process Dynamics & Control (409341)	Process Dynamics And Control (409341)
Thursday 09/05/2019	Chemical Reaction Engineering - II (409342)	Chemical Reaction Engineering-II (409342)
Saturday 11/05/2019	Chemical Engineering Design- II (409343)	Chemical Engineering Design-II (409343)
	ELECTIVE-I Environmental Engineering (409344A)	ELECTIVE-I Environmental Engineering (409344A)
Tuesday	ELECTIVE-I Membrane Technology (409344B)	ELECTIVE-I Membrane Technology (409344B)
14/05/2019	ELECTIVE-I Corrosion Engineering (409344C)	ELECTIVE-I Corrosion Engineering (409344C)
	ELECTIVE-I Petroleum Refining (409344D)	ELECTIVE-I Petroleum Refining (409344D)
Thursday 16/05/2019	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)

APR/MAY-2019 Page 4 of 23

SEM-II

Day & Date	2015 Course Time-02.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Process Modeling and Simulation (409349)	Process Modelling & Simulation (409349)
Wednesday 22/05/2019	Process Engineering Costing & Plant Design (409350)	Process Engineering Costing & Plant Design (409350)
	ELECTIVE-III Energy Conservation In Chemical Process Industries (409351A)	ELECTIVE-III Energy Conservation In Chemical Process Industries (409351A)
Friday	ELECTIVE-III Chemical Process Safety (409351B)	ELECTIVE-III Chemical Process Safety (409351B)
24/05/2019	ELECTIVE-III Food Technology (409351C)	ELECTIVE-III Food Technology (409351C)
	ELECTIVE-III Advanced Materials (409351D)	ELECTIVE-III Advanced Materials (409351D)
	ELECTIVE-IV Catalysis (409352A)	ELECTIVE-IV Catalysis (409352A)
Monday 27/05/2019	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)

APR/MAY-2019 Page 5 of 23

CIVIL

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 04/05/2019	Environmental Engineering - II (401001)	Environmental Engineering - II (401001)
Thursday 09/05/2019	Transportation Engineering (401002)	Transportation Engineering (401002)
Saturday 11/05/2019	* Structural Design & Drawing-III (401003) 2.00 PM To 05.00 PM	* Structural Design & Drawing - III (401003) 02.00 PM To 05.00 PM
	ELECTIVE-I Structural Design of Bridges (401004A)	ELECTIVE-I Structural Design Of Bridges (401004A)
	ELECTIVE-I Systems Approach in Civil Engineering (401004B)	ELECTIVE-I Systems Approach In Civil Engineering (401004B)
Tuesday 14/05/2019	ELECTIVE-I Advanced Concrete Technology (401004C)	ELECTIVE-I Advanced Concrete Technology (401004C)
	ELECTIVE-I Architecture and Town Planning (401004D)	ELECTIVE-I Architecture And Town Planning (401004D)
	ELECTIVE-I Advanced Engineering Geology with Rock Mechanics (401004E)	ELECTIVE-I Advanced Engineering Geology With Rock Mechanics (401004E)
	ELECTIVE-II Matrix Methods of Structural Analysis (401005A)	ELECTIVE-II Matrix Methods Of Structural Analysis (401005A)
	ELECTIVE-II Integrated Water Resources Planning & Managment (401005B)	ELECTIVE-II Integrated Water Resources And Planning (401005B)
Thursday 16/05/2019	ELECTIVE-II TQM & MIS in Civil Engineering (401005C)	ELECTIVE-II TQM & MIS In Civil Engineering (401005C)
	ELECTIVE-II Earthquake Engineering (401005D)	ELECTIVE-II Earthquake Engineering (401005D)
	ELECTIVE-II Advanced Geotechnical Engineering (401005E)	ELECTIVE-II Advanced Geotechnical Engineering (401005E)

NOTE:-

*Please note the timing

APR/MAY-2019 Page 6 of 23

SEM-II

Day & Date	2015 Course	2012 Course
	Time-2.00 PM To 04.30 PM	Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Dams and Hydraulic Structures (401007)	Dams And Hydraulic Structures (401007)
Wednesday 22/05/2019	Quantity Surveying, Contracts and Tenders (401008)	Quantity Surveying cotracts And Tenders (401008)
	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)
Friday	ELECTIVE-III Hydropower Engineering (401009C)	ELECTIVE-III Hydropower Engineering (401009C)
24/05/2019	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)	
	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)
Monday 27/05/2019	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)

APR/MAY-2019 Page 7 of 23

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 04/05/2019	High Performance Computing (410241)	Design & Analysis Of Algorithms (410441)
Thursday 09/05/2019	Artificial Intelligence & Robotics (410242)	Principles Of Modern Comlpiler Design (410442)
Saturday 11/05/2019	Data Analysis (410243)	Smart System Design And Applications (410443)
	ELECTIVE-I Digital Signal Processing (410244A)	ELECTIVE-I Image Processing (410444A)
Tuesday	ELECTIVE-I Software Architecture & Design (410244B)	ELECTIVE-I Computer Network Design And Modeling (410444B)
14/05/2019	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)
Thursday 16/05/2019	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)

APR/MAY-2019 Page 8 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Machine Learning (410250)	Software Dessign Methodology And Testing (410449)
Wednesday 22/05/2019	Information and Cyber Security (410251)	High Performance Computing (410450)
	ELECTIVE-III Advanced Digital Signal Processing (410252A)	ELECTIVE-III Mobile Computing (410451A)
	ELECTIVE-III Compilers (410252B)	ELECTIVE-III Web Technology (410451B)
Friday 24/05/2019	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)
	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)
Monday 27/05/2019	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)

APR/MAY-2019 Page 9 of 23

ELECTRICAL

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 04/05/2019	Power System Operation & Control (403141)	Power System Operation And Control (403141)
Thursday 09/05/2019	PLC & SCADA Applications (403142)	PLC And SCADA Applications (403142)
Saturday 11/05/2019	Control System-II (403145)	Control System - II (403145)
	ELECTIVE-I Fundamentals of Microcontroller & its Applications (403143A)	ELECTIVE-I Special Purpose Machines (403143A)
Tuesday	ELECTIVE-I Power Quality (403143B)	ELECTIVE-I Power Quality (403143B)
14/05/2019	ELECTIVE-I Renewable Energy System (403143C)	ELECTIVE-I Renewable Energy Systems (403143C)
	ELECTIVE-I Digital Signal Processing (403143D)	ELECTIVE-I Digital Signal Processing (403143D)
Thursday 16/05/2019	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)	

APR/MAY-2019 Page 10 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Switchgear and Protection (403147)	Switchgear And Protection (403147)
Wednesday 22/05/2019	Power Electronic Controlled Drives (403148)	Power Electronic Controlled Drives (403148)
	ELECTIVE-III High Voltage Engineering (403149A)	ELECTIVE-III High Voltage Engineering (403149A)
	ELECTIVE-III HVDC and FACTS (403149B)	ELECTIVE-III HVDC And FACTS (403149B)
Friday 24/05/2019	ELECTIVE-III Digital Control System (403149C)	ELECTIVE-III Digital Control System (403149C)
24/03/2013	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)	
	ELECTIVE-IV Smart Grid (403150A)	ELECTIVE-IV Smart Grid (403150A)
Monday 27/05/2019	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)

APR/MAY-2019 Page 11 of 23

ELECTRONICS

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 04/05/2019	VLSI Design (404201)	VLSI Design (404201)
Thursday 09/05/2019	Advnaced Power Electronics (404202)	Electronic System Design (404202)
Saturday 11/05/2019	Electronics System Design (404203)	Advance Power Electronics (404203)
	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)
Tuesday 14/05/2019	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)	
	ELECTIVE-II Mobile Communication (404205A)	ELECTIVE-II DSP Processors (404205A)
	ELECTIVE-II Bio-Medical Electronics (404205B)	ELECTIVE-II Robotics And Automation (404205B)
Thursday 16/05/2019	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)	

APR/MAY-2019 Page 12 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Computer Networks & Security (404209)	Computer Network (404209)
Wednesday 22/05/2019	Process Instrumentation (404210)	Process Automation (404210)
	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)
Friday 24/05/2019	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)	
	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)
Monday	ELECTIVE-IV TM4C123GH6PM Microcontroller (404212D)	ELECTIVE-IV Mechatronics (404212D)
27/05/2019	* 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

APR/MAY-2019 Page 13 of 23

ELECTRONICS & TELECOMMUNICATION

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 04/05/2019	VLSI Design & Technology (404181)	VLSI Design & Technology (404181)
Thursday 09/05/2019	Computer Networks & Security (404182)	Computer Networks (404182)
Saturday 11/05/2019	Radiation & Microwave Techniques (404183)	Microwave Engineering (404183)
	ELECTIVE-I Digital Image video Processing (404184A)	ELECTIVE-I Digital Image Processing (408184A)
Tuesday	ELECTIVE-I Industrial Drives & Control (404184B)	ELECTIVE-I Embedded Systems & RTOS (408184B)
14/05/2019	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)
Thursday 16/05/2019	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)	

APR/MAY-2019 Page 14 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Mobile Communication (404189)	Mobile Communication (404189)
Wednesday 22/05/2019	Broadband Communication Systems (404190)	Broadband Communication Systems (404190)
	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)
Friday 24/05/2019	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)	
	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)
Monday 27/05/2019	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)

APR/MAY-2019 Page 15 of 23

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 04/05/2019	Information & Cyber Security (414453)	Information And Cyber Security (414453)
Thursday 09/05/2019	Machine Learning & Applications (414454)	Software Modeling And Design (414454)
Saturday 11/05/2019	Software Design & Modeling (414455)	Machine Learning (414455)
	ELECTIVE-I Wireless Communications (414456A)	ELECTIVE-I Soft Computing (414456A)
	ELECTIVE-I Natural Language Processing (414456B)	ELECTIVE-I Usability Engineering (414456B)
Tuesday 14/05/2019	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)
	ELECTIVE-II Software Defined Networks (414457A)	ELECTIVE-II Business Intelligence (414457A)
	ELECTIVE-II Soft Computing (414457B)	ELECTIVE-II Service Oriented Architecture (414457B)
Thursday 16/05/2019	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)

APR/MAY-2019 Page 16 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Distributed Computing System (414462)	Distributed System (414461)
Wednesday 22/05/2019	Ubiquitous Computing (414463)	Advanced Databases (414462)
	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)
Friday 24/05/2019	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)
	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)
Monday 27/05/2019	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)

APR/MAY-2019 Page 17 of 23

INSTRUMENTATION & CONTROL

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 04/05/2019	Process Dynamics & Control (406261)	Process Instrumentation- I (406261)
Thursday 09/05/2019	Project Engineering & Management (406262)	Project Engineering & Management (406262)
Saturday 11/05/2019	Computer Techniques & Applications (406263)	Digital Control (406263)
	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)
Tuesday 14/05/2019	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)
	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)
Thursday 16/05/2019	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)

APR/MAY-2019 Page 18 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Process Instrumentation (406268)	Process Instrumentation- II (406267)
Wednesday 22/05/2019	Industrial Automation (406269)	Industrial Automation (406268)
	ELECTIVE-III Building Automation (406270A)	ELECTIVE-III Digital Image Processing (406269A)
	ELECTIVE-III Robotics and Automation (406270B)	ELECTIVE-III Building Automation- II (406269B)
Friday 24/05/2019	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)
Monday 27/05/2019	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)

APR/MAY-2019 Page 19 of 23

MECHANICAL

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	Hydraulics & Pneumatics (402041)	Refrigeration And Air Conditioning (402041)
04/05/2019	@ Refrigeration and Air Conditioning (302049)	
Thursday 09/05/2019	CAD/CAM Automation (402042)	CAD/CAM Automation (402042)
Saturday 11/05/2019	Dynamics of Machinery (402043)	Dynamics Of Machinery (402043)
	ELECTIVE-I Finite Element Analysis (402044A)	ELECTIVE-I Energy Audit Management (402044A)
Tuesday	ELECTIVE-I Computational Fluid Dynamics (402044B)	ELECTIVE-I Tribology (402044B)
14/05/2019	ELECTIVE-I Heating Ventilation & Air Conditioning (402044C)	ELECTIVE-I Reliability Engineering (402044C)
		ELECTIVE-I Machine Tool Design (402044D)
	ELECTIVE-II Automobile Engineering (402045A)	ELECTIVE-II Gas Turbine Propulsion (402045A)
Thursday	ELECTIVE-II Operation Research (402045B)	ELECTIVE-II Product Design And Development (402045B)
16/05/2019	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 (also including the students of 2008 pattern who have received 2012 pattern equivalence) and who got admitted in B.E. 2015 pattern.

APR/MAY-2019 Page 20 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	Energy Engineering (402047)	Power Plant Engineering (402047)
Wednesday 22/05/2019	* Mechanical System Design (402048) 2.00 PM To 05.00 PM	*Mechanical System Design (402048) 02.00 PM To 05.00 PM
	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)
Friday 24/05/2019		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)
	ELECTIVE-IV Advanced Manufacturing Processes (402050A)	ELECTIVE-IV Computational Fluid Dynamics (402050A)
Monday 27/05/2019	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:-

APR/MAY-2019 Page 21 of 23

^{*} Please Note The Timing

MECHANICAL-SANDWICH

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 14/05/2019	Automobile Engineering (Self-Study-III) (402064)	Automobile Engineering (Self Study-III) (402064)
	Plant Engineering and Maintenance (Self-Study-III) (402065)	Power Plant Engineering (Self Study-IV) (402065)

APR/MAY-2019 Page 22 of 23

SEM-II

Day & Date	2015 Course Time-2.00 PM To 04.30 PM	2012 Course Time-02.00 PM To 04.30 PM
Monday 20/05/2019	** Energy Engineering (402047)	Mechanical Vibrations (402066)
Wednesday 22/05/2019	** Mechanical System Design (402048) 2.00 PM To 05.00 PM	** Mechanical System Design (402048) 02.00 PM To 05.00 PM
Friday 24/05/2019	Mechanical Vibrations (402066)	Industrial Hydraulics And Pneumatics (402067)
	ELECTIVE-I Computational Fluid Dynamics (402068A)	ELECTIVE-I Refrigeration And Air Conditioning (402068 A)
Monday	ELECTIVE-I CAD/ CAM Automation (402068B)	ELECTIVE-I Computational Fluid Dynamics (402068 B)
27/05/2019	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)
Wednesday 29/05/2019	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:-

Ganeshkhind, Pune - 411 007

Ref.No/XCT/1152 Date:09/04/2019 Dr. Ashok Chavan Director

Board of Examinations And Evaluation

APR/MAY-2019 Page 23 of 23

^{*} Please Note The Timing

^{**} Common to Mechanical Engineering