SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

EXAMINATION CIRCULAR NO. 216 OF. 2019

BACHELOR OF ENGINEERING (2012 & 2015 COURSE)

INSEM-I Examination of AUGUST -2019
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.

B.E. (AUTOMOBILE ENGINEERING)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Automotive Refrigeration and Air Conditioning (416488)	Automotive Refrigeration and Air Conditioning (416488)
Tuesday, 20.08.2019	Automotive Chassis and Systems (416489)	Alternative Fuels and Emission Control (416489)
Wednesday, 21.08.2019	Machine and Vehicle Dynamics (416490)	Machine and Vehicle Dynamics (416490)
Thursday, 22.08.2019	**Elective – I (416491)** a) Fundamentals of Computational Fluid Dynamics b) Fundamentals of Finite Element Analysis c) CAE and Automation	**Elective – I (416491)** a) Fundamentals of Computational Fluid Dynamics b) Fundamentals of Finite Element Analysis c) CAE and Automation
Friday, 23.08.2019	**Elective – II (416492)** a) Hybrid and Fuel Cell Vehicle b) Automotive Materials c) Automotive Hydraulics and Pneumatics	**Elective – II (416492)** a) Special Purpose Vehicle b) Vehicle Maintenance c) Product Design and Development

B.E. (CHEMICAL ENGINEERING)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Process Dynamics and Control (409341)	Process Dynamics and Control (409341)
Tuesday, 20.08.2019	Chemical Reaction Engineering II (409342)	Chemical Reaction Engineering II (409342)
Wednesday, 21.08.2019	Chemical Engineering Design II (409343)	Chemical Engineering Design II (409343)
Thursday, 22.08.2019	**Elective – I (409344)** a) Environmental Engineering b) Membrane Technology c) Corrosion Engineering d) Petroleum Refining	**Elective – I (409344)** a) Environmental Engineering b) Membrane Technology c) Corrosion Engineering d) Petroleum Refining
Friday, 23.08.2019	**Elective – II (409345)** a) Chemical Process Synthesis b) Industrial Management & Entrepreneurship c) Piping Design & Engineering d) Advance Separation Processes	**Elective – II (409345)** a) Chemical Process Synthesis b) Industrial Management & Entrepreneurship c) Piping Design & Engineering d) Advance Separation Processes

B.E.(CIVIL)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Environmental Engineering – II (401001)	Environmental Engineering – II (401001)
Tuesday, 20.08.2019	Transportation Engineering (401002)	Transportation Engineering (401002)
Wednesday, 21.08.2019	Structural Design and Drawing –III (401003) *(* Time – 2.00 to 3.30)*	Structural Design and Drawing –III (401003) *(* Time – 2.00 to 3.30)*
Thursday, 22.08.2019	**Elective – I (401004)** a) Structural Design of Bridges b) System Approach in Civil Engineering c) Advanced Concrete Technology d) Architecture and Town Planning e) Advanced Engineering Geology with Rock Mechanics	**Elective – I (401004)** a) Structural Design of Bridges b) System Approach in Civil Engineering c) Advanced Concrete Technology d) Architecture and Town Planning e) Advanced Engineering Geology with Rock Mechanics
Friday, 23.08.2019	**Elective – II (401005)** a) Matrix Methods of Structural Analysis b) Integrated Water Resources and Planning c) TQM & MIS in Civil Engineering d) Earthquake Engineering e) Advanced Geotechnical Engineering	**Elective – II (401005)** a) Matrix Methods of Structural Analysis b) Integrated Water Resources and Planning and Management c) TQM & MIS in Civil Engineering d) Earthquake Engineering e) Advanced Geotechnical Engineering

* Please note the Timing

B.E. (COMPUTER ENGINEERING)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Design & Analysis of Algorithms (410441)	High Performance Computing (410241)
Tuesday, 20.08.2019	Principles of Modern Compiler Design (410442)	Artificial Intelligence and Robotics (410242)
Wednesday, 21.08.2019	Smart System Design and Applications (410 443)	Data Analytics (410243)
Thursday, 22.08.2019	**Elective – I (410444)** a) Image Processing b) Computer Network Design and Modeling, c) Advanced Computer Programming, d) Data Mining Techniques and Applications.	**Elective – I (410244)** a) Digital Signal Processing b) Software Architecture and Design c) Pervasive and Ubiquitous Computing d) Data Mining and Warehousing
Friday, 23.08.2019	**Elective – II (410445)** a) Problem Solving with Gamification b) Pervasive Computing c) Embedded Security d) Multidisciplinary NLP	**Elective – II (410245)** a) Distributed Systems b) Software Testing and Quality Assurance c) Operation Research d) Mobile Communications

B.E. (MECHANICAL)

SEMESTER-I   Time – 2.00 to 3.00 p.m.

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Refrigeration and Air Conditioning (402041)	Hydraulics and Pneumatics (402041) * Refrigeration and Air Conditioning
Tuesday, 20.08.2019	CAD/CAM Automation (402042)	CAD/CAM Automation (402042)
Wednesday, 21.08.2019	Dynamics of Machinery (402043)	Dynamics of Machinery (402043)
Thursday, 22.08.2019	**Elective – I (402044)** a) Energy Audit Management b) Tribology c) Reliability Engineering d) Machine Tool Design	**Elective – I (402044)** a) Finite Element Analysis b) Computational Fluid Dynamics c) Heating Ventilation and Air Conditioning
Friday, 23.08.2019	**Elective – II (402045)** a) Gas Turbine Propulsion b) Product Design and Development c) Operation Research d) Advanced Manufacturing Processes	**Elective – II (402045)** a) Automobile Engineering b) Operation Research c) Energy Audit and Management

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

B.E. (ELECTRICAL)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Power System Operation and Control (403141)	Power System Operation and Control (403141)
Tuesday, 20.08.2019	PLC and SCADA Applications (403142)	PLC and SCADA Applications (403142)
Wednesday, 21.08.2019	Control System – II (403145)	Control System – II (403145)
Thursday, 22.08.2019	**Elective – I (403143)** a) Special Purpose Machines b) Power Quality c) Renewable Energy Systems d) Digital Signal Processing	**Elective – I (403143)** a) Fundamentals of Microcontroller MSP430 and its Applications (Open Elective) b) Power Quality c) Renewable Energy Systems d) Digital Signal Processing
Friday, 23.08.2019	**Elective – II (403144)** a) Restructuring and Deregulation b) Electromagnetic Fields c) EHV AC Transmission d) Introduction to Electrical Transportation Systems	**Elective – II (403144)** a) Restructuring and Deregulation b) Electromagnetic Fields c) EHV AC Transmission d) Electric and Hybrid Vehicles e) Special Purpose Machines

B.E. (ELECTRONICS)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	VLSI Design (404201)	VLSI Design (404201)
Tuesday, 20.08.2019	Electronics System Design (404202)	Advanced Power Electronics (404202)
Wednesday, 21.08.2019	Advanced Power Electronics (404203)	Electronics System Design (404203)
Thursday, 22.08.2019	**Elective – I (404204)** a) Image Processing and Machine Vision b) Embedded Systems & RTOS c) Biomedical Instrumentation d) Advanced Measurement Systems	**Elective – I (404204)** a) Digital Image and Video Processing b) Audio and Speech Processing c) Embedded Systems & RTOS d) Internet of Things e) Software Defined Radio
Friday, 23.08.2019	**Elective – II (404205)** a) DSP Processors b) Robotics and Automation c) Electronics in Agriculture d) Mobile Communication	**Elective – II (404205)** a) Mobile Communication b) Bio-Medical Electronics c) Optimization Techniques d) Computer Modelling And Simulation e) Digital Signal Processor TMS320C67X

B.E. (ELECTRONICS & TELECOMMUNICATIOINS)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	VLSI Design & Technology (404181)	VLSI Design & Technology (404181)
Tuesday, 20.08.2019	Computer Networks (404182)	Computer Networks and Security (404182)
Wednesday, 21.08.2019	Microwave Engineering (404183)	Radiation and Microwave Techniques (404183)
Thursday, 22.08.2019	**Elective – I (404184)** a) Digital Image Processing b) Embedded System and RTOS c) Software Defined Radio d) Industrial Drives and Control	**Elective – I (404184)** a) Digital Image and Video Processing b) Industrial Drives and Control c) Embedded System and RTOS d) Internet of Things
Friday, 23.08.2019	**Elective – II -(404185)** a) Multi rate & Adaptive Signal Processing b) Electronic Product Design c) PLCs and Automation d) Artificial Intelligence	**Elective – II -(404185)** a) Wavelets b) Electronic Product Design c) Optimization Techniques d) Artificial Intelligence e) Electronics in Agriculture

B.E. (INFORMATION TECHNOLOGY)

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Information and Cyber Security (414453)	Information and Cyber Security (414453)
Tuesday, 20.08.2019	Software Modeling and Design (414454)	Machine Learning and Applications (414454)
Wednesday, 21.08.2019	Machine Learning (414455)	Software Design and Modeling (414455)
Thursday, 22.08.2019	**Elective – I (414456)** a) Soft Computing b) Usability Engineering c) Modern Compilers d) Parallel Algorithms and Design e) Cloud Computing	**Elective – I (414456)** a) Wireless Communications b) Natural Language Processing c) Usability Engineering d) Multicore and Concurrent Systems e) Business Analytics and Intelligence
Friday, 23.08.2019	**Elective – II (414457)** a) Business Intelligence b) Service Oriented Architecture c) E& M Governance d) Geo Informatics Systems e) Natural Language Processing	**Elective – II (414457)** a) Software Defined Networks b) Soft Computing c) Software Testing and Quality Assurance d) Complier Construction e) Gamification

B.E. INSTRUMENTATION & CONTROL

SEMESTER-I   **Time – 2.00 to 3.00 p.m.**

Day & Date	SUBJECT (2012 Course)	SUBJECT (2015 Course)
Monday, 19.08.2019	Process Instrumentation - I (406261)	Process Dynamics and Control (406261)
Tuesday, 20.08.2019	Project Engineering & Management (406262)	Project Engineering & Management (406262)
Wednesday, 21.08.2019	Digital Control (406263)	Computer Techniques and Applications (406263)
Thursday, 22.08.2019	**Elective – I (406264)** a) Advanced Bio-Medical Instrumentation b) Building Automation - I c) Advanced Control Systems d) Advanced Sensors e) Advanced Digital Signal Processing	**Elective – I (406264)** a) Industrial Internet of Things b) Electrical Drives c) Advanced Digital Signal Processing d) Advanced Bio-Medical Instrumentation e) Digital Control Systems
Friday, 23.08.2019	**Elective – II (406265)** a) Opto- Electronics Instrumentation b) Environmental Instrumentation c) Robotics & Automation d) Sensor Networks e) Fault Detection and Diagnosis	**Elective – II (406265)** a) Smart and Wireless Instrumentation b) Instrumentation and Control for Power Plants c) Automotive Instrumentation d) Opto- Electronics Instrumentation e) Soft Computing

Ganeshkhind, Pune-411007
Ref. / XCT /1160   Director
Date: 26/07/2019   Board of Examinations & Evaluation