

# **SAVITRIBAI PHULE PUNE UNIVERSITY**

**(Formerly University of Pune)**



**EXAMINATION CIRCULAR NO. 262 OF. 2022**

**BACHELOR OF ENGINEERING (2019 COURSE)**

**Examination of OCT/NOV/DEC-2022**

**(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 stipulated time.
- Candidates are forbidden from taking any material into the examination hall that can be treated as a malpractice.
- Candidates are requested to see the Notice Board at their center of examination regularly for changes if any that may be notified later in the program.
- No request shall be granted for change in time or date for the University Examination on any ground.
- Candidates are requested to note the Day, Date and Time of Paper.
- Candidates are permitted to use stencils at the time of examination.
- The exchanges of side-rules, drawing instruments of other materials used in the examination hall is not permitted at the time of examination. 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 pocket size Calculator is allowed. The exchange of Calculators is not allowed. Electronics Devices including mobile are not allowed at the time of examination.
- The written examination will be conducted in the following order.

## **AUTOMOBILE**

### **SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	416481	Automotive Testing and Certification
Friday 06-01-2023	416482	Machine and Vehicle Dynamics
Saturday 07-01-2023	416483	Industrial Engineering* Time:-02.00 PM To 4.00 PM
Monday 09-01-2023	416484 A	(ELECTIVE - III) Artificial Intelligence and Machine Learning
	416484 B	(ELECTIVE - III) Automotive Control Systems
	402044 E	(ELECTIVE - III) Internet of Things**
Tuesday 10-01-2023	416485 A	(ELECTIVE - IV) Finite Elements Analysis
	416485 B	(ELECTIVE - IV) Computational Fluid Dynamics

**NOTE: - \* PLESASE NOTE THE TIME**

**\*\* COMMON WITH MECHANICAL ENGINEERING**

**BIOTECHNOLOGY**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	415461	Biochemical Engineering
Friday 06-01-2023	415462	Bioinformatics
Monday 09-01-2023	415463 A	(ELECTIVE - III) Bioprocess Equipment Design
	415463 B	(ELECTIVE - III) Environmental Biotechnology
	415463 C	(ELECTIVE - III) Genomics
Tuesday 10-01-2023	415464 A	(ELECTIVE - IV) Bioenergy and Renewable Resources
	415464 B	(ELECTIVE - IV) Nanotechnology
	415464 C	(ELECTIVE - IV) Stem Cell Biology and Regenerative Medicine

**CHEMICAL**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	409341	Process Dynamics and Control
Friday 06-01-2023	409342	Chemical Reaction Engineering- II
Saturday 07-01-2023	409343	Chemical Engineering Design
Monday 09-01-2023	409344 A	(ELECTIVE - III) Environmental Engineering
	409344 B	(ELECTIVE - III) Membrane Technology
	409344 C	(ELECTIVE - III) Industrial Piping
	409344 D	(ELECTIVE - III) Petroleum Refining
Tuesday 10-01-2023	409345 A	(ELECTIVE - IV) Chemical Process Synthesis
	409345 B	(ELECTIVE - IV) Industrial Management & Entrepreneurship
	409345 C	(ELECTIVE - IV) Green Technology
	409345 D	(ELECTIVE - IV) Advance Separation Processes

**CIVIL**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	401001	Foundation Engineering
Friday 06-01-2023	401002	Transportation Engineering
Monday 09-01-2023	401003 A	(ELECTIVE - III) Coastal Engineering
	401003 B	(ELECTIVE - III) Advanced Design of Concrete Structures
	401003 C	(ELECTIVE - III) Integrated Water Resources Planning & Management
	401003 D	(ELECTIVE - III) Finite Element Method
	401003 E	(ELECTIVE - III) Data Analytics
	401003 F	(ELECTIVE - III) Operation Research
Tuesday 10-01-2023	401004 A	(ELECTIVE - IV) Air Pollution and Control
	401004 B	(ELECTIVE - IV) Advanced Design of Steel Structures
	401004 C	(ELECTIVE - IV) Statistical Analysis and Computational Method
	401004 D	(ELECTIVE - IV) Airport and Bridge Engineering
	401004 E	(ELECTIVE - IV) Design of Prestressed Concrete Structures
	401004 F	(ELECTIVE - IV) Formwork and Plumbing Engineering

**COMPUTER**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	410241	Design and Analysis of Algorithms
Friday 06-01-2023	410242	Machine Learning
Saturday 07-01-2023	410243	Blockchain Technology
Monday 09-01-2023	410244 A	(ELECTIVE - III) Pervasive Computing
	410244 B	(ELECTIVE - III) Multimedia Techniques
	410244 C	(ELECTIVE - III) Cyber Security and Digital Forensics
	410244 D	(ELECTIVE - III) Object Oriented Modeling and Design
	410244 E	(ELECTIVE - III) Digital Signal Processing
Tuesday 10-01-2023	410245 A	(ELECTIVE - IV) Information Retrieval
	410245 B	(ELECTIVE - IV) GPU Programming and Architecture
	410245 C	(ELECTIVE - IV) Mobile Computing
	410245 D	(ELECTIVE - IV) Software Testing and Quality Assurance
	410245 E	(ELECTIVE - IV) Compilers

**ELECTRICAL**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	403141	Power System Operation & Control
Friday 06-01-2023	403142	Advanced Control System
Monday 09-01-2023	403143 A	(ELECTIVE - III) PLC and SCADA
	403143 B	(ELECTIVE - III) Power Quality Management
	403143 C	(ELECTIVE - III) High Voltage Engineering
	403143 D	(ELECTIVE - III) Robotics and Automation
Tuesday 10-01-2023	403144 A	(ELECTIVE - IV) Alternate Energy System
	403144 B	(ELECTIVE - IV) Electrical & Hybrid Vehicle
	403144 C	(ELECTIVE - IV) Special-purpose Machines
	403144 D	(ELECTIVE - IV) HVDC & FACTS

**ELECTRONICS**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	404201	VLSI Design
Friday 06-01-2023	404202	Advanced Power Electronics
Saturday 07-01-2023	404203	Electronic System Design
Monday 09-01-2023	404184 A	(ELECTIVE - III) Speech Processing *
	404184 C	(ELECTIVE - III) Java Script*
	404204 A	(ELECTIVE - III) Internet of Things
	404204 B	(ELECTIVE - III) Software Defined Radio
	404204 C	(ELECTIVE - III) Testing and Verification for SOC design
Tuesday 10-01-2023	404185 D	(ELECTIVE - IV) Low power CMOS*
	404185 E	(ELECTIVE - IV) Smart Antennas*
	404205 A	(ELECTIVE - IV) Mobile Communication
	404205 B	(ELECTIVE - IV) Embedded Systems
	404205 C	(ELECTIVE - IV) Optimization Techniques

**NOTE: - \* COMMON WITH E. & TC.**

## **ELECTRONICS & TELECOMMUNICATION**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	404181	Radiation & Microwave Theory
Friday 06-01-2023	404182	VLSI Design and Technology
Saturday 07-01-2023	404183	Cloud Computing
Monday 09-01-2023	404184 A	(ELECTIVE - III) Speech Processing
	404184 B	(ELECTIVE - III) PLC SCADA & Automation
	404184 C	(ELECTIVE - III) JAVA Script
	404184 D	(ELECTIVE - III) Embedded & RTOS
	404184 E	(ELECTIVE - III) Modernized IoT
Tuesday 10-01-2023	404185 A	(ELECTIVE - IV) Data Mining
	404185 B	(ELECTIVE - IV) Electronic Product Development
	404185 C	(ELECTIVE - IV) Deep Learning
	404185 D	(ELECTIVE - IV) Low Power CMOS
	404185 E	(ELECTIVE - IV) Smart Antennas

## **INFORMATION TECHNOLOGY**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	414441	Information and Storage Retrieval
Friday 06-01-2023	414442	Software Project Management
Saturday 07-01-2023	414443	Deep Learning
Monday 09-01-2023	414444 A	(ELECTIVE - III) Mobile Computing
	414444 B	(ELECTIVE - III) High Performance Computing
	414444 C	(ELECTIVE - III) Multimedia Technology
	414444 D	(ELECTIVE - III) Smart Computing
Tuesday 10-01-2023	414445 A	(ELECTIVE - IV) Bioinformatics
	414445 B	(ELECTIVE - IV) Introduction to DevOps
	414445 C	(ELECTIVE - IV) Computer Vision
	414445 D	(ELECTIVE - IV) Wireless Communications

## **INSTRUMENTATION & CONTROL**

### **SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	406261	Process Control Techniques
Friday 06-01-2023	406262	Project Engineering and Management
Monday 09-01-2023	406263 A	(ELECTIVE - III) Digital Image Processing
	406263 B	(ELECTIVE - III) Data Analytics
	406263 C	(ELECTIVE - III) Wireless Sensor Networks
	406263 D	(ELECTIVE - III) Process Modelling and Optimization
Tuesday 10-01-2023	406264 A	(ELECTIVE - IV) Cloud Computing
	406264 B	(ELECTIVE - IV) Soft Computing
	406264 C	(ELECTIVE - IV) Automotive Instrumentation
	406264 D	(ELECTIVE - IV) Advanced Control System

**MECHANICAL**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	402041	Heating Ventilation Air-Conditioning and Refrigeration
Friday 06-01-2023	402042	Dynamics of Machinery
Saturday 07-01-2023	402043	* Turbomachinery <b>Time:-02.00 PM To 4.00 PM</b>
Monday 09-01-2023	402044 A	(ELECTIVE - III) Automobile Design
	402044 B	(ELECTIVE - III) Design of Heat Transfer Equipments
	402044 C	(ELECTIVE - III) Modern Machining Processes
	402044 D	(ELECTIVE - III) Industrial Engineering
	402044 E	(ELECTIVE - III) Internet of Things
	402044 F	(ELECTIVE - III) Computational Fluid Dynamics
Tuesday 10-01-2023	402045 A	(ELECTIVE - IV) Product Design and Development
	402045 B	(ELECTIVE - IV) Experimental Methods in Thermal Engineering
	402045 C	(ELECTIVE - IV) Additive Manufacturing
	402045 D	(ELECTIVE - IV) Operations Research
	402045 E	(ELECTIVE - IV) Augmented Reality and Virtual Reality

**NOTE: - \* PLESASE NOTE THE TIME**

**MECHANICAL-SANDWICH**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Monday 09-01-2023	402064	Energy Engineering And Management (SELF-STUDY-III)
Tuesday 10-01-2023	402065	Industrial Engineering And Organizational Management (SELF-STUDY-IV)

**PRINTING TECHNOLOGY**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	408283	Gravure Printing Techniques
Friday 06-01-2023	408284	Digital Printing Techniques
Monday 09-01-2023	408281 A	(ELECTIVE - III) Paper Board and Corrugation Package Technology
	408281 B	(ELECTIVE - III) Polymer Science
Tuesday 10-01-2023	408282 A	(ELECTIVE - IV) Multimedia Advertising
	408282 B	(ELECTIVE - IV) Process Optimization and Total Quality Management in Printing

## **PRODUCTION ENGINEERING**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	411081	Automation and Control Engineering
Friday 06-01-2023	411082	Operations Research
Monday 09-01-2023	411083 A	(ELECTIVE - III) Simulation, Modeling and Digital Twin
	411083 B	(ELECTIVE - III) Total Quality management
	411083 C	(ELECTIVE - III) Artificial Intelligence in Manufacturing
	411083 D	(ELECTIVE - III) World Class Manufacturing
Tuesday 10-01-2023	411084 A	(ELECTIVE - IV) Plant Maintenance and industrial safety
	411084 B	(ELECTIVE - IV) Surface Engineering
	411084 C	(ELECTIVE - IV) Reverse Engineering
	411084 D	(ELECTIVE - IV) Entrepreneurship and Innovations

## **PRODUCTION SANDWICH ENGINEERING**

### **SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
Thursday 05-01-2023	411121	Manufacturing Automation
Friday 06-01-2023	411122	Operations Research
Monday 09-01-2023	411123 A	(ELECTIVE - III) Additive Manufacturing
	411123 B	(ELECTIVE - III) Industrial Robotics
	411123 C	(ELECTIVE - III) Reliability Engineering
	411123 D	(ELECTIVE - III) Micro-Electro mechanical systems
Tuesday 10-01-2023	411124 A	(ELECTIVE - IV) Creative Product Design
	411124 B	(ELECTIVE - IV) Mechatronics
	411124 C	(ELECTIVE - IV) CAD/CAM
	411124 D	(ELECTIVE - IV) Data analytics

**HONORS/MINORS**

**SEMESTER - VII**

**Time:-02.00 PM To 4.30 PM**

<b>Day &amp; Date</b>	<b>Paper Code</b>	<b>Subject</b>
<b>Wednesday</b> <b>11-01-2023</b>	<b>401401</b>	Traffic and Transportation Planning
	<b>401301</b>	Work Method Statement Making
	<b>402014</b>	Additive Manufacturing System Design
	<b>402024</b>	Electrical Energy Systems
	<b>402034</b>	Modelling and Simulation of EHV
	<b>402044</b>	System modelling and simulation
	<b>404181</b>	Industrial Robotics & Automation
	<b>404181</b>	Smart Contracts & Cryptocurrency
	<b>408214</b>	Sustainable Packaging
	<b>410301</b>	Machine Learning
	<b>410401</b>	Internet of Things and Embedded Security
	<b>410501</b>	Machine Learning and Data Science
	<b>410601</b>	Machine Learning for Internet of Things
	<b>410701</b>	Virtual Reality in Game Development

Ganeshkhind, Pune - 411 007

**Ref.No/XCT/753**

**Date:16/12/2022**

**Director**

**Board of Examinations And Evaluation**