

# **SAVITRIBAI PHULE PUNE UNIVERSITY**

**(Formerly University of Pune)**



**EXAMINATION CIRCULAR NO. 279 OF. 2023**

**THIRD YEAR ENGINEERING (2019 PATTERN)**

**Insem Examination of Aug / Sept - 2023**

**(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**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Numerical & Optimization Methods (316481)
Tuesday, 05/09/2023	Heat Transfer (316482)
Wednesday, 06/09/2023	Design of Machine Components (316483)
Thursday, 07/09/2023	Automobile Electrical and Electronics (316484)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Advanced Forming & Joining Processes (302045-A)*
	<b>ELECTIVE-I</b> Machining Science and Technology (302045-B)*

Note :- \* Common with Mechanical

## **CHEMICAL**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Mass Transfer-I (309341)
Tuesday, 05/09/2023	Chemical Technology -II (309342)
Wednesday, 06/09/2023	Chemical Engineering Mathematics (309343)
Thursday, 07/09/2023	Chemical Engineering Thermodynamics (309344)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Chemical Industry Management (409345A)
	<b>ELECTIVE-I</b> Food Technology (309345 B)
	<b>ELECTIVE-I</b> Polymer Engineering (309345 C)
	<b>ELECTIVE-I</b> Downstream Processing (309345 D)

## CIVIL

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Hydrology and Water Resources Engineering (301001)
Tuesday, 05/09/2023	Water Supply Engineering (301002)
Wednesday, 06/09/2023	Design of Steel Structures (301003) # (Time : 11:00 AM To 12:15 PM)
Thursday, 07/09/2023	Engineering Economics and Financial Management (301004)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Advanced Fluid Mechanics and Hydraulic Machines (301005 a)
	<b>ELECTIVE-I</b> Research Methodology and IPR (301005 b)
	<b>ELECTIVE-I</b> Construction Management. (301005 c)
	<b>ELECTIVE-I</b> Advanced Concrete Technology (301005 d)
	<b>ELECTIVE-I</b> Matrix Methods of Structural Analysis (301005 e)
	<b>ELECTIVE-I</b> Advanced Mechanics of Structures (301005 f)

**Note : - # Please Note the time**

## COMPUTER

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Database Management Systems (310241) *
Tuesday, 05/09/2023	Theory of Computation (310242)
Wednesday, 06/09/2023	Systems Programming and Operating System (310243)
Thursday, 07/09/2023	Computer Networks and Security (310244)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Internet of Things and Embedded Systems (310245 A)
	<b>ELECTIVE-I</b> Human Computer Interface (310245 B)
	<b>ELECTIVE-I</b> Distributed Systems (310245 C)
	<b>ELECTIVE-I</b> Software Project Management (310245 D)

**Note :- \* Common with A.I.D.S.**

## **ELECTRICAL**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Industrial and Technology Management (303141)
Tuesday, 05/09/2023	Power Electronics (303142)
Wednesday, 06/09/2023	Electrical Machines-II (303143)
Thursday, 07/09/2023	Electrical Installation Design and Condition Based Maintenance (303144)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Advanced Microcontroller and Embedded System (303145 A)
	<b>ELECTIVE-I</b> Digital Signal Processing (303145 B)
	<b>ELECTIVE-I</b> Open Elective (303145 C)

## **ELECTRONICS**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Power and Industrial Electronics (304201)
Tuesday, 05/09/2023	Electromagnetic Waves and Propagation Theory (404202)
Wednesday, 06/09/2023	Database Management (304183) *
Thursday, 07/09/2023	Microcontrollers and Applications (304204)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Instrumentation systems (304205 )
	<b>ELECTIVE-I</b> Machine Learning (304205 )
	<b>ELECTIVE-I</b> Fundamentals of JAVA Programming (304185) *
	<b>ELECTIVE-I</b> Data Communication (304205 )
	<b>ELECTIVE-I</b> Computer Networks (304205 )

**Note :-** \* Common with E&TC

## **ELECTRONICS & TELECOMMUNICATION**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Digital Communication (304181)
Tuesday, 05/09/2023	Electromagnetic Field Theory (304182)
Wednesday, 06/09/2023	Database Management (304183) *
Thursday, 07/09/2023	Microcontrollers (304184)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Digital Signal Processing (304185 )
	<b>ELECTIVE-I</b> Electronic Measurements (304185 )
	<b>ELECTIVE-I</b> Fundamentals of JAVA Programming (304185 ) *
	<b>ELECTIVE-I</b> Computer Networks (304185 )
<b>Note :-</b> * Common with Electronics	

## **INFORMATION TECHNOLOGY**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Theory of Computation (314441)
Tuesday, 05/09/2023	Operating Systems (314442)
Wednesday, 06/09/2023	Machine Learning (314443)
Thursday, 07/09/2023	Human Computer Interaction (314444)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Design and Analysis of Algorithm (314445 A)
	<b>ELECTIVE-I</b> Advanced Database and Management System (314445 B)
	<b>ELECTIVE-I</b> Design Thinking (314445 C)
	<b>ELECTIVE-I</b> Internet of Things (314445 D)

## **INSTRUMENTATION & CONTROL**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Embedded Systems (306261)
Tuesday, 05/09/2023	Industrial Automation-I (306262)
Wednesday, 06/09/2023	Modern Control Theory (306263)
Thursday, 07/09/2023	Operating System (306264)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Mechatronics & Robotics (306265 A)
	<b>ELECTIVE-I</b> Data Science (306265 B)
	<b>ELECTIVE-I</b> Power Electronics (306265 C)
	<b>ELECTIVE-I</b> Bio-Medical Instrumentation (306265 D)

## **MECHANICAL**

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Numerical & Statistical Methods (302041) *
Tuesday, 05/09/2023	Heat & Mass Transfer (302042) *
Wednesday, 06/09/2023	Design of Machine Elements (302043) *
Thursday, 07/09/2023	Mechatronics (302044) *
Friday, 08/09/2023	<b>ELECTIVE-I</b> Advanced Forming & Joining Processes (302045-A) **
	<b>ELECTIVE-I</b> Machining Science & Technology (302045-B) **

NOTE:- \* **Common to Mechanical Sandwich Engineering**  
\*\* **Common to Automobile Engineering**

## MECHANICAL-SANDWICH

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Numerical & Statistical Methods (302041) *
Tuesday, 05/09/2023	Heat & Mass Transfer (302042) *
Wednesday, 06/09/2023	Design of Machine Elements (302043) *
Thursday, 07/09/2023	Mechatronics (302044) *
Friday, 08/09/2023	Fundamentals of Computer Aided Engineering (302061)

NOTE:- \* *Common to Mechanical Engineering*

## B. Tech. Biotechnology

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Analytical Techniques (315461)
Tuesday, 05/09/2023	Material Balances and Stoichiometry (315462)
Wednesday, 06/09/2023	Genetic Engineering (315463)
Thursday, 07/09/2023	Introduction to Immunology (315464)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Enzyme Technology (315465 A)
	<b>ELECTIVE-I</b> Good Laboratory Practices and Good Manufacturing Practices (315465 B)
	<b>ELECTIVE-I</b> Agricultural Biotechnology (315465 C)

## Printing

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Print Statistics (308281)
Tuesday, 05/09/2023	Offset Printing Techniques (308282)
Wednesday, 06/09/2023	Color Science and Measurement (308283)
Thursday, 07/09/2023	Ink Technology (308284)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Cyber Security (308286 A)
	<b>ELECTIVE-I</b> Wood, Glass and Metal Based Packaging (308286 B)
	<b>ELECTIVE-I</b> Engineering Ethics (308286 C )

## Production

### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Engineering Metrology and Instrumentation (311081 (A)
Tuesday, 05/09/2023	Material Forming Technology (311082) (A)
Wednesday, 06/09/2023	Machining Science and Technology (311083 )(A)
Thursday, 07/09/2023	Kinematics and Design of Machines (311084 )(A)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Finite Element Analysis (311085) (A)-I)
	<b>ELECTIVE-I</b> Advances in Manufacturing Processes (311085) (A)-II)
	<b>ELECTIVE-I</b> Mechatronics (311085) (A)-III )
	<b>ELECTIVE-I</b> Supply Chain Management (311085 )(A)-IV )



# Production Sandwich

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Manufacturing Technology (Self Study) (311122 )(A)

# Automation and Robotics

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Design of Robot Elements (302521 )
Tuesday, 05/09/2023	Robot Kinematics and Dynamics (302522 )
Wednesday, 06/09/2023	Computer Aided Engineering and Manufacturing (302523 )
Thursday, 07/09/2023	Signal Processing and Conditioning (302524 )
Friday, 08/09/2023	<b>ELECTIVE-I</b> Advanced Forming & Joining Processes (302525-A )
	<b>ELECTIVE-I</b> Optimization Techniques (302525-B)

# Electronics and Computer Engineering

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Database Management Systems [310341]
Tuesday, 05/09/2023	Advanced Java Programming [310342]
Wednesday, 06/09/2023	Data Communication [310343]
Thursday, 07/09/2023	Microcontroller and Applications [310344]
Friday, 08/09/2023	<b>ELECTIVE-I</b> Distributed Systems [310345 A]
	<b>ELECTIVE-I</b> Block Chain Technology [310345 B]
	<b>ELECTIVE-I</b> Digital Signal Processing [310345 C]
	<b>ELECTIVE-I</b> Sensors and Applications [310345 D]

# Mechatronics Engineering

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Machine Design [317541]
Tuesday, 05/09/2023	Manufacturing Processes [317542]
Wednesday, 06/09/2023	Control System [317543]
Thursday, 07/09/2023	Digital Signal Processing [317544]
Friday, 08/09/2023	Microcontrollers [317545]

# Robotics and Automation Engineering

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Embedded systems in Robotics [311501] (A)
Tuesday, 05/09/2023	Hydraulics and Pneumatics [311502] (A)
Wednesday, 06/09/2023	Robot Kinematics and Dynamics [311503] (A)
Thursday, 07/09/2023	Sensors Technology [311504] (A)
Friday, 08/09/2023	<b>ELECTIVE-I</b> Statistics and Numerical Methods [311505] (A)-I
	<b>ELECTIVE-I</b> Finite Element Analysis [311505] (A)-II
	<b>ELECTIVE-I</b> Industrial Robotics and Material handling Systems [311505] (A)-III
	<b>ELECTIVE-I</b> Intelligent Manufacturing System [311505] (A)-IV

# Artificial Intelligence and Data Science

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Data Base Management System [310241] *
Tuesday, 05/09/2023	Computer Networks [317521]
Wednesday, 06/09/2023	Web Technology [310252]
Thursday, 07/09/2023	Artificial Intelligence [310253]
Friday, 08/09/2023	<b>ELECTIVE-I</b> Embedded Systems & Security [317522] (A)
	<b>ELECTIVE-I</b> Design Thinking [314445] (C)
	<b>ELECTIVE-I</b> Pattern Recognition [317522] (B)
	<b>ELECTIVE-I</b> Human Computer Interface [310245] (B)

**Note :- \* Common with Computer Engineering**

# Artificial Intelligence and Machine Learning

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Design and analysis of Algorithm [318541]
Tuesday, 05/09/2023	IoT with Artificial Intelligence [318542]
Wednesday, 06/09/2023	Web Technology [318543]
Thursday, 07/09/2023	Management & Entrepreneurship for IT Industry [318544]
Friday, 08/09/2023	<b>ELECTIVE-I</b> Robotics [318545] (A)
	<b>ELECTIVE-I</b> Pattern Recognition [318545] (B)
	<b>ELECTIVE-I</b> Information Security [318545] (C)
	<b>ELECTIVE-I</b> Business Intelligence [318545] (D)

# Computer Science and Design

## SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Monday, 04/09/2023	Software Engineering and Project Management [318241]
Tuesday, 05/09/2023	Theory of Computation [318242]
Wednesday, 06/09/2023	Database System Design [318243]
Thursday, 07/09/2023	Design and analysis of Algorithm [318244]
Friday, 08/09/2023	<b>ELECTIVE-I</b> Internet of Things [318245] (A)
	<b>ELECTIVE-I</b> Pattern Recognition [318245] (B)
	<b>ELECTIVE-I</b> Distributed Systems [318245] (C)
	<b>ELECTIVE-I</b> Data Mining and warehousing [318245] (D)

## **HONORS / MINORS**

### **SEM-I**

<b>Day &amp; Date</b>	<b>Honors / Minors</b>	<b>Time : Time : 11:00 AM To 12:00 NOON</b>
<b>Saturday, 09/09/2023</b>	Artificial Intelligence And Machine	Computational Statistics (310301)
	Cyber Security	Information and Cyber Security (310401)
	Data Science	Data Science and Visualization (310501)
	Internet of Things	Embedded Systems and Internet of Things (310601)
	Virtual Reality And Augmented Reality	Virtual Reality (310701)
	Systems Engineering	Foundations of systems & systems engineering (302041MJ)
	Energy Management in Utility Systems	Energy Management (302021MJ)
	Electric Vehicles	e-Vehicle Technology (302031MJ)
	3D Printing	Additive Manufacturing Technology (302011MJ)
	Robotics	Principles of Robotics (304181 HR)
	Block Chain Technology	Introduction to Block chain (304181 HBCT)
	Metro Construction	Surveying in Metro construction (301301)
	Architecture and Town Planning	Urban Housing and Infrastructure Planning (301401)
	Advanced Packaging Technology	Internet of Things (308211)

Ganeshkhind, Pune - 411 007

**Ref.No/ XCT/ 882**

**Date: 23 / 08 / 2023**

**Director**

**Board of Examinations and Evaluation**