## **SAVITRIBAI PHULE PUNE UNIVERSITY**

### (Formerly University of Pune)



### EXAMINATION CIRCULAR NO. 180 OF. 2024 THIRD YEAR ENGINEERING (2019 PATTERN) Insem Examination of Aug / Sept - 2024 (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 othermaterials 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**

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	SEW-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Numerical & Optimization Methods (316481)
Monday, 02/09/2024	Heat Transfer (316482)
Tuesday, 03/09/2024	Design of Machine Components (316483)
Wednesday, 04/09/2024	Automobile Electrical and Electronics (316484)
Thursday, 05/09/2024	ELECTIVE-I Advanced Forming & Joining Processes (302045-A)*
	ELECTIVE-I Machining Science and Technology (302045-B)*

Note :- \* Common with Mechanical

#### **CHEMICAL**

SEM-I

	SEM-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Mass Transfer-I (309341)
Monday, 02/09/2024	Chemical Technology -II (309342)
Tuesday, 03/09/2024	Chemical Engineering Mathematics (309343)
Wednesday, 04/09/2024	Chemical Engineering Thermodynamics (309344)
	ELECTIVE-I Chemical Industry Management (409345A)
Thursday,	ELECTIVE-I Food Technology (309345 B)
05/09/2024	ELECTIVE-I Polymer Engineering (309345 C)
	ELECTIVE-I Downstream Processing (309345 D)

# CIVIL SEM-I

	SEM-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Hydrology and Water Resources Engineering (301001)
Monday, 02/09/2024	Water Supply Engineering (301002)
Tuesday, 03/09/2024	Design of Steel Structures (301003) # (Time : 11:00 AM To 12:15 PM)
Wednesday, 04/09/2024	Engineering Economics and Financial Management (301004)
	ELECTIVE-I Advanced Fluid Mechanics and Hydraulic Machines (301005 a)
	ELECTIVE-I Research Methodology and IPR (301005 b)
Thursday,	ELECTIVE-I Construction Management. (301005 c)
05/09/2024	ELECTIVE-I Advanced Concrete Technology (301005 d)
	ELECTIVE-I Matrix Methods of Structural Analysis (301005 e)
	ELECTIVE-I Advanced Mechanics of Structures (301005 f)

Note : - # Please Note the time

### **COMPUTER**

SEM-I

<u>ULMI</u>	
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Database Management Systems (310241) *
Monday, 02/09/2024	Theory of Computation (310242)
Tuesday, 03/09/2024	Systems Programming and Operating System (310243)
Wednesday, 04/09/2024	Computer Networks and Security (310244)
	ELECTIVE-I Internet of Things and Embedded Systems (310245 A)
Thursday,	ELECTIVE-I Human Computer Interface (310245 B)
05/09/2024	ELECTIVE-I Distributed Systems (310245 C)
	ELECTIVE-I Software Project Management (310245 D)

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

### **ELECTRICAL**

SEM-I

_	SEIVI-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Industrial and Technology Management (303141)
Monday, 02/09/2024	Power Electronics (303142)
Tuesday, 03/09/2024	Electrical Machines-II (303143)
Wednesday, 04/09/2024	Electrical Installation Design and Condition Based Maintenance (303144)
Thursday, 05/09/2024	ELECTIVE-I Advanced Microcontroller and Embedded System (303145 A)
	ELECTIVE-I Digital Signal Processing (303145 B)
	ELECTIVE-I Open Elective (303145 C)

### **ELECTRONICS**

	SEM-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Power and Industrial Electronics (304201)
Monday, 02/09/2024	Electromagnetic Waves and Propagation Theory (404202)
Tuesday, 03/09/2024	Database Management (304183) *
Wednesday, 04/09/2024	Microcontrollers and Applications (304204)
	ELECTIVE-I Instrumentation systems (304205)
	ELECTIVE-I Machine Learning (304205)
Thursday, 05/09/2024	ELECTIVE-I Fundamentals of JAVA Programming (304185) *
	ELECTIVE-I Data Communication (304205)
	ELECTIVE-I Computer Networks (304205)
Note :- * Common with E&TC	

### **ELECTRONICS & TELECOMMUNICATION**

	SEM-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Digital Communication (304181)
Monday, 02/09/2024	Electromagnetic Field Theory (304182)
Tuesday, 03/09/2024	Database Management (304183) *
Wednesday, 04/09/2024	Microcontrollers (304184)
	ELECTIVE-I Digital Signal Processing (304185)
Thursday,	ELECTIVE-I Electronic Measurements (304185)
05/09/2024	ELECTIVE-I Fundamentals of JAVA Programming (304185) *
	ELECTIVE-I Computer Networks (304185)
Note :- * Common with Electronics	

## **INFORMATION TECHNOLOGY**

SEM-I	
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Theory of Computation (314441)
Monday, 02/09/2024	Operating Systems (314442)
Tuesday, 03/09/2024	Machine Learning (314443)
Wednesday, 04/09/2024	Human Computer Interaction (314444)
Thursday, 05/09/2024	ELECTIVE-I Design and Analysis of Algorithm (314445 A)
	ELECTIVE-I Advanced Database and Management System (314445 B)
	ELECTIVE-I Design Thinking (314445 C)
	ELECTIVE-I Internet of Things (314445 D)

### **INSTRUMENTATION & CONTROL**

SFM-I

1	SEIVI-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Embedded Systems (306261)
Monday, 02/09/2024	Industrial Automation-I (306262)
Tuesday, 03/09/2024	Modern Control Theory (306263)
Wednesday, 04/09/2024	Operating System (306264)
	ELECTIVE-I Mechatronics & Robotics (306265 A)
Thursday,	ELECTIVE-I Data Science (306265 B)
05/09/2024	ELECTIVE-I Power Electronics (306265 C)
	ELECTIVE-I Bio-Medical Instrumentation (306265 D)

#### **MECHANICAL**

_	SEM-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Numerical & Statistical Methods (302041) *
Monday, 02/09/2024	Heat & Mass Transfer (302042) *
Tuesday, 03/09/2024	Design of Machine Elements (302043) *
Wednesday, 04/09/2024	Mechatronics (302044) *
Thursday,	ELECTIVE-I Advanced Forming & Joining Processes (302045-A) **
05/09/2024	ELECTIVE-I Machining Science & Technology (302045-B) **

### **MECHANICAL-SANDWICH**

	SEM-I
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON
Saturday, 31/08/2024	Numerical & Statistical Methods (302041) *
Monday, 02/09/2024	Heat & Mass Transfer (302042) *
Tuesday, 03/09/2024	Design of Machine Elements (302043) *
Wednesday, 04/09/2024	Mechatronics (302044) *
Thursday, 05/09/2024	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	
Saturday, 31/08/2024	nalytical Techniques (315461)	
Monday, 02/09/2024	laterial Balances and Stoichiometry (315462)	
Tuesday, 03/09/2024	Genetic Engineering (315463)	
Wednesday, 04/09/2024	Introduction to Immunology (315464)	
	ELECTIVE-I Enzyme Technology (315465 A)	
Thursday, 05/09/2024	ELECTIVE-I Good Laboratory Practices and Good Manufacturing Practices (315465 B)	
	ELECTIVE-I Agricultural Biotechnology (315465 C)	

### **Printing**

SEIVIFI		
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Print Statistics (308281)	
Monday, 02/09/2024	Offset Printing Techniques (308282)	
Tuesday, 03/09/2024	olor Science and Measurement (308283)	
Wednesday, 04/09/2024	Ink Technology (308284)	
	ELECTIVE-I Cyber Security (308286 A)	
Thursday, 05/09/2024	ELECTIVE-I Wood, Glass and Metal Based Packaging (308286 B)	
	ELECTIVE-I Engineering Ethics (308286 C )	

#### **Production**

SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Engineering Metrology and Instrumentation (311081 (A)	
Monday, 02/09/2024	Material Forming Technology (311082) (A)	
Tuesday, 03/09/2024	Machining Science and Technology (311083 )(A)	
Wednesday, 04/09/2024	Kinematics and Design of Machines (311084 )(A)	
	ELECTIVE-I Finite Element Analysis (311085) (A)-I)	
Thursday,	ELECTIVE-I Advances in Manufacturing Processes (311085) (A)-II)	
05/09/2024	ELECTIVE-I Mechatronics (311085) (A)-III )	
	ELECTIVE-I Supply Chain Management (311085 )(A)-IV )	

# **Production Sandwich**

#### SEM-I

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Manufacturing Technology (Self Study) (311122 )(A)	

# **Automation and Robotics**

SEM-I		
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Design of Robot Elements (302521)	
Monday, 02/09/2024	Robot Kinematics and Dynamics (302522 )	
Tuesday, 03/09/2024	Computer Aided Engineering and Manufacturing (302523)	
Wednesday, 04/09/2024	Signal Processing and Conditioning (302524)	
Thursday,	ELECTIVE-I Advanced Forming & Joining Processes (302525-A)	
05/09/2024	ELECTIVE-I Optimization Techniques (302525-B)	

SEM-I

# **Electronics and Computer Engineering**

SEM-I		
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Database Management Systems [310341]	
Monday, 02/09/2024	Advanced Java Programming [310342]	
Tuesday, 03/09/2024	Data Communication [310343]	
Wednesday, 04/09/2024	Microcontroller and Applications [310344]	
	ELECTIVE-I Distributed Systems [310345 A]	
Thursday,	ELECTIVE-I Block Chain Technology [310345 B]	
05/09/2024	ELECTIVE-I Digital Signal Processing [310345 C]	
	ELECTIVE-I Sensors and Applications [310345 D]	

# **Mechatronics Engineering**

	SEM-I	
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Machine Design [317541]	
Monday, 02/09/2024	Manufacturing Processes [317542]	
Tuesday, 03/09/2024	Control System [317543]	
Wednesday, 04/09/2024	Digital Signal Processing [317544]	
Thursday, 05/09/2024	Microcontrollers [317545]	

# **Robotics and Automation Engineering**

<u>SEM-I</u>

Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Embedded systems in Robotics [311501] (A)	
Monday, 02/09/2024	Hydraulics and Pneumatics [311502] (A)	
Tuesday, 03/09/2024	Robot Kinematics and Dynamics [311503] (A)	
Wednesday, 04/09/2024	Sensors Technology [311504] (A)	
	ELECTIVE-I Statistics and Numerical Methods [311505] (A)-I	
Thursday,	ELECTIVE-I Finite Element Analysis [311505] (A)-II	
05/09/2024	ELECTIVE-I Industrial Robotics and Material handling Systems [311505] (A)-III	
	ELECTIVE-I 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	
Saturday, 31/08/2024	Data Base Management System [310241] *	
Monday, 02/09/2024	Computer Networks [317521]	
Tuesday, 03/09/2024	Web Technology [310252]	
Wednesday, 04/09/2024	Artificial Intelligence [310253]	
	ELECTIVE-I Embedded Systems & Security [317522] (A)	
Thursday, 05/09/2024	ELECTIVE-I Design Thinking [314445] (C)	
	ELECTIVE-I Pattern Recognition [317522] (B)	
	ELECTIVE-I 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	
Saturday, 31/08/2024	Design and analysis of Algorithm [318541]	
Monday, 02/09/2024	oT with Artificial Intelligence [318542]	
Tuesday, 03/09/2024	Veb Technology [318543]	
Wednesday, 04/09/2024	Management & Entrepreneurship for IT Industry [318544]	
	ELECTIVE-I Robotics [318545] (A)	
Thursday,	ELECTIVE-I Pattern Recognition [318545] (B)	
05/09/2024	ELECTIVE-I Information Security [318545] (C)	
	ELECTIVE-I Business Intelligence [318545] (D)	

# **Computer Science and Design**

	SEM-I	
Day & Date	2019 Course Time : 11:00 AM To 12:00 NOON	
Saturday, 31/08/2024	Software Engineering and Project Management [318241]	
Monday, 02/09/2024	Theory of Computation [318242]	
Tuesday, 03/09/2024	Database System Design [318243]	
Wednesday, 04/09/2024	Design and analysis of Algorithm [318244]	
	ELECTIVE-I Internet of Things [318245] (A)	
Thursday,	ELECTIVE-I Pattern Recognition [318245] (B)	
05/09/2024	ELECTIVE-I Distributed Systems [318245] (C)	
	ELECTIVE-I Data Mining and warehousing [318245] (D)	

#### **HONORS / MINORS**

SEM-I

Day & Date	Honors / Minors	Time : Time : 11:00 AM To 12:00 NOON
	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)
Friday,	Energy Management in Utility Systems	Energy Management (302021MJ)
06/09/2024	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/ 534 Date: 19 / 08 / 2024

Director

Board of Examinations and Evaluation