SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

EXAMINATION CIRCULAR NO. 13 OF. 2024

BACHELOR OF ENGINEERING (2019 PATTERN)

Examination of INSEM MARCH/APRIL-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 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.

B.E. AUTOMOBILE ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Hybrid and Electric Vehicle	416489
Thursday, 21/03/2024	Automotive System Design	416490
Tuesday, 26/03/2024	(ELECTIVE - V) Alternative Fuels and Emission control	416491 A
	(ELECTIVE - V) Renewable Energy	416491 B
Wednesday, 27/03/2024	(ELECTIVE - VI) Transport Management and Automobile Industry	416492 A
	(ELECTIVE - VI) Automotive Safety	416492 B
	(ELECTIVE - VI) Process Planning and Cost Estimation	416492 C

B.E. BIOTECHNOLOGY

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Bioprocess Modeling and Simulation	415471
Thursday, 21/03/2024	Plant Engineering and Project costing	415472
Tuesday, 26/03/2024	(ELECTIVE - V) Biomaterials	415473 A
	(ELECTIVE - V) Molecular diagnostics	415473 B
	(ELECTIVE - V) Bio-therapeutics Technology	415473 C
Wednesday, 27/03/2024	(ELECTIVE - VI) Management and Entrepreneurship	415474 A
	(ELECTIVE - VI) IPR, Intellectual Property Rights.	415474 B
	(ELECTIVE - VI) Industrial Organization and Management	415474 C

B.E. CHEMICAL ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Process Modeling and Simulation	409349
Thursday, 21/03/2024	Process Engineering Costing & Plant Design	409350
Tuesday, 26/03/2024	(ELECTIVE - V) Energy Audit and Conservation	409351 A
	(ELECTIVE - V) Chemical Process Safety	409351 B
	(ELECTIVE - V) Computational Fluid Dynamics	409351 C
	(ELECTIVE - V) Advanced Materials	409351 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Catalysis	409352 A
	(ELECTIVE - VI) Nanotechnology	409352 B
	(ELECTIVE - VI) Fuel Cell Technology	409352 C
	(ELECTIVE - VI) Petrochemical Engineering	409352 D

B.E. CIVIL ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Dams and Hydraulics Structures	401011
Thursday, 21/03/2024	Quantity Surveying, Contracts and Tenders **TIME: 02.00 PM TO 03.15 PM.**	401012
Tuesday, 26/03/2024	(ELECTIVE - V) Earthquake Engineering	401013 A
	(ELECTIVE - V) Structural Design of Bridges	401013 B
	(ELECTIVE - V) Irrigation and Drainage	401013 C
	(ELECTIVE - V) Design of Precast and Composite Structures	401013 D
	(ELECTIVE - V) Hydropower Engineering	401013 E
	(ELECTIVE - V) Structural Audit and Retrofitting of Structures	401013 F
Wednesday, 27/03/2024	(ELECTIVE - VI) TQM and MIS	401014 A
	(ELECTIVE - VI) Advanced Transportation Engineering	401014 B
	(ELECTIVE - VI) Geo Synthetic Engineering	401014 C
	(ELECTIVE - VI) Structural Design of Foundations	401014 D
	(ELECTIVE - VI) Green Structures and Smart Cities	401014 E
	(ELECTIVE - VI) Rural Water Supply and Sanitation	401014 F

B.E. COMPUTER ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	High Performance Computing	410250
Thursday, 21/03/2024	Deep Learning	410251
Tuesday, 26/03/2024	(ELECTIVE - V) Natural Language Processing	410252 A
	(ELECTIVE - V) Image Processing	410252 B
	(ELECTIVE - V) Software Defined Networks	410252 C
	(ELECTIVE - V) Advanced Digital Signal Processing	410252 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Pattern Recognition	410253 A
	(ELECTIVE - VI) Soft Computing	410253 B
	(ELECTIVE - VI) Business Intelligence	410253 C
	(ELECTIVE - VI) Quantum Computing	410253 D

B.E. ELECTRICAL ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Switchgear and Protection	403148
Thursday, 21/03/2024	Advanced Electrical Drives & Control	403149
Tuesday, 26/03/2024	(ELECTIVE - V) Digital Control System	403150 A
	(ELECTIVE - V) Restructuring and Deregulation	403150 B
	(ELECTIVE - V) Smart Grid	403150 C
	(ELECTIVE - V) Sensor Technology (Open Elective)	403150 D
Wednesday, 27/03/2024	(ELECTIVE - VI) EHV AC Transmission	403151 A
	(ELECTIVE - VI) Illumination Engineering	403151 B
	(ELECTIVE - VI) Electromagnetic Fields	403151 C
	(ELECTIVE - VI) AI and ML (Open Elective)	403151 D

B.E. ELECTRONICS ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Process Instrumentation	404210
Tuesday, 26/03/2024	(ELECTIVE - V) Biomedical Electronics	404211 A
	(ELECTIVE - V) Artificial Intelligence and Neural Network	404211 B
	*(ELECTIVE - V) Android Development	404191 C
	(ELECTIVE - V) Audio Video Engineering	404211 C
	(ELECTIVE - V) Automotive Electronics	404211 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Renewable Energy System & DSM	404212 A
	(ELECTIVE - VI) Wireless Sensor Network	404212 B
	*(ELECTIVE - VI) Remote Sensing	404192 C
	*(ELECTIVE - VI) Digital Marketing	404192 D

* Subjects common with BE E&TC 2019 course

B.E. ELECTRONICS & TELECOMMUNICATION ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Fiber Optic Communication	404190
Tuesday, 26/03/2024	(ELECTIVE - V) Biomedical Signal Processing	404191 A
	(ELECTIVE - V) Industrial Drives & Automation	404191 B
	(ELECTIVE - V) Android Development	404191 C
	(ELECTIVE - V) Embedded System Design	404191 D
	(ELECTIVE - V)Mobile Computing	404191 E
Wednesday, 27/03/2024	(ELECTIVE - VI) System on Chip	404192 A
	(ELECTIVE - VI) Nano Electronics	404192 B
	(ELECTIVE - VI) Remote Sensing	404192 C
	(ELECTIVE - VI) Digital Marketing	404192 D

B.E. INFORMATION TECHNOLOGY

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Distributed Systems	414450
Tuesday, 26/03/2024	(ELECTIVE - V) Software Defined Networks	414451 A
	(ELECTIVE - V) Social Computing	414451 B
	(ELECTIVE - V) Natural Language Processing	414451 C
	(ELECTIVE - V) Soft Computing	414451 D
	(ELECTIVE - V) Game Engineering	414451 E
Wednesday, 27/03/2024	(ELECTIVE - VI) Ethical Hacking and Security	414452 A
	(ELECTIVE - VI) Augmented and Virtual Reality	414452 B
	(ELECTIVE - VI) Business Analytics and Intelligence	414452 C
	(ELECTIVE - VI) Blockchain Technology	414452 D

B.E. INSTRUMENTATION & CONTROL

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Process Instrumentation	406268
Thursday, 21/03/2024	Advanced Embedded System	406269
Tuesday, 26/03/2024	(ELECTIVE - V) Electric Vehicles	406270 A
	(ELECTIVE - V) Safety Instrumentation Systems	406270 B
	(ELECTIVE - V) Renewable Energy Systems	406270 C
	(ELECTIVE - V) Optical Instrumentation	406270 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Cyber Security	406271 A
	(ELECTIVE - VI) Automation in Agriculture	406271 B
	(ELECTIVE - VI) Environmental Instrumentation	406271 C

B.E. MECHANICAL ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Computer Integrated Manufacturing	402048
Thursday, 21/03/2024	Energy Engineering	402049
Tuesday, 26/03/2024	(ELECTIVE - V) Quality and Reliability Engineering	402050 A
	(ELECTIVE - V) Energy Audit and Management	402050 B
	(ELECTIVE - V) Manufacturing Systems and Simulation	402050 C
	(ELECTIVE - V) Engineering Economics and Financial Management	402050 D
	(ELECTIVE - V) Organizational Informatics	402050 E
	(ELECTIVE - V) Computational Multi Body Dynamics	402050 F
Wednesday, 27/03/2024	(ELECTIVE - VI) Process Equipment Design	402051 A
	(ELECTIVE - VI) Renewable Energy Technologies	402051 B
	(ELECTIVE - VI) Automation and Robotics	402051 C
	(ELECTIVE - VI) Industrial Psychology and Organizational Behavior	402051 D
	(ELECTIVE - VI) Electrical and Hybrid Vehicle	402051 E

B.E. MECHANICAL SANDWICH

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Design of Transmission Elements** **TIME: 02.00 PM TO 03.30 PM.**	402066
Thursday, 21/03/2024	Machine Dynamics and Vibration	402067
Friday, 22/03/2024	Artificial Intelligence in Mechanical Engineering	402068
Tuesday, 26/03/2024	(ELECTIVE - I) Automobile Engineering	402069 A
	(ELECTIVE - I) Refrigeration and Air-Conditioning	402069 B
	(ELECTIVE - I) Fluid Power Control	402069 C
	(ELECTIVE - I) Additive Manufacturing	402045 C
	(ELECTIVE - I) Automation and Robotics	402051 C
Wednesday, 27/03/2024	(ELECTIVE - II) Product Design and Development	402045 A
	(ELECTIVE - II) Operations Research	402045 D
	(ELECTIVE - II) Electrical and Hybrid Vehicle	402051 E
	(ELECTIVE - II) Quality and Reliability Engineering	402050 A
	(ELECTIVE - II) Internet of Things	402044 E

Note: ** Please note the Timing

B.E. PRINTING TECHNOLOGY

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Operations Management in Printing and Packaging	408290
Thursday, 21/03/2024	Adhesives and Coatings in Packaging	408291
Tuesday, 26/03/2024	(ELECTIVE - V) Food and Pharmaceutical Packaging	408288 A
	(ELECTIVE - V) Printed Electronics	408288 B
Wednesday, 27/03/2024	(ELECTIVE - VI) Sustainable Packaging	408289 A
	(ELECTIVE - VI) Management Information Systems and Data Science	408289 B

B.E. PRODUCTION ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Computer Integrated Design and Manufacturing	411088
Thursday, 21/03/2024	Industrial Robotics	411089
Tuesday, 26/03/2024	(ELECTIVE - V) E-Mobilty in Automobile	411090 A
	(ELECTIVE - V) Smart Manufacturing	411090 B
	(ELECTIVE - V) Manufacturing System design	411090 C
	(ELECTIVE - V) Ergonomics and Work Management	411090 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Facility Planning	411091 A
	(ELECTIVE - VI) Additive Manufacturing	411091 B
	(ELECTIVE - VI) Reliability Engineering	411091 C
	(ELECTIVE - VI) Data Analytics	411091 D

B.E. PRODUCTION SANDWICH ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Tuesday, 26/03/2024	(ELECTIVE - V) Supply Chain Management	411134 A
	(ELECTIVE - V) Plant Engineering and Maintenance	411134 B
	(ELECTIVE - V) Industrial Relation and Human Resource Management	411134 C
	(ELECTIVE - V) Marketing mgmt.	411134 D

B.E. ROBOTICS & AUTOMATION

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Field and Service Robots	411508
Thursday, 21/03/2024	PLC and SCADA Programming	411509
Tuesday, 26/03/2024	(ELECTIVE - V) Reverse Engineering	411510 A
	(ELECTIVE - V) Data Analytics	411510 B
	(ELECTIVE - V) Entrepreneurship and Innovations	411510 C
	(ELECTIVE - V) Electronics system design and Analysis	411510 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Additive Manufacturing	411511 A
	(ELECTIVE - VI) Industry 4.0	411511 B
	(ELECTIVE - VI) VLSI design for Robotics	411511 C
	(ELECTIVE - VI) Intelligent Robotics systems	411511 D

B.E. ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Natural Language Processing	418550
Tuesday, 26/03/2024	(ELECTIVE - V) Distributed System	418551 A
	(ELECTIVE - V) Software Project and Management	418551 B
	(ELECTIVE - V) Computer Vision	418551 C
Wednesday, 27/03/2024	(ELECTIVE - VI) Reinforcement Learning	418552 A
	(ELECTIVE - VI) Big data analytics	418552 B
	(ELECTIVE - VI) AI using R programming	418552 C

B.E. AUTOMATION & ROBOTICS

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Embedded Systems in Robots	402549
Thursday, 21/03/2024	Fundamentals of Autonomous Systems	402550
Tuesday, 26/03/2024	(ELECTIVE - V) Industrial Robotics & Material Handling systems	402551 A
	(ELECTIVE - V) Supply Chain Management	402551 B
	(ELECTIVE - V) Product Design & Development	402045 A
	(ELECTIVE - V) Manufacturing Systems and Simulation	402050 C
	(ELECTIVE - V) Engineering Economics and Financial Management	402050 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Data Science	402552 A
	(ELECTIVE - VI) Data Visualization	402552 B
	(ELECTIVE - VI) Network Science	402552 C
	(ELECTIVE - VI) Internet of Things	402044 E
	(ELECTIVE - VI) Industrial Psychology and Organizational Behavior	402051 D

B.E. ELECTRONICS AND COMPUTER ENGINEERING

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Artificial Intelligence and Machine Learning	410350
Thursday, 21/03/2024	VLSI Design and Technology	410351
Tuesday, 26/03/2024	(ELECTIVE - V) Cloud Computing	410352 A
	(ELECTIVE - V) Embedded System and Real Time Operating Systems	410352 B
	(ELECTIVE - V) Software Testing and Quality Assurance	410352 C
	(ELECTIVE - V) Artificial Neural Network	410352 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Data Mining and Warehousing	410353 A
	(ELECTIVE - VI) Electric Vehicle Technology	410353 B
	(ELECTIVE - VI) Software Defined Radio	410353 C
	(ELECTIVE - VI) Wireless Sensor Network	410353 D

B.E.   ARTIFICIAL INTELLIGENCE & DATA SCIENCE

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Computational Intelligence	417530
Thursday, 21/03/2024	Distributed Computing	417531
Tuesday, 26/03/2024	(ELECTIVE - V) Virtual Reality and Game Development	417532 A
	(ELECTIVE - V) Big Data analytics	417532 B
	(ELECTIVE - V) Software Development for Portable Devices	417532 C
	(ELECTIVE - V) Deep Learning	417532 D
Wednesday, 27/03/2024	(ELECTIVE - VI) Augmented Reality	417533 A
	(ELECTIVE - VI) Business Intelligence	417533 B
	(ELECTIVE - VI) Information Systems Management	417533 C
	(ELECTIVE - VI) Reinforcement Learning	417533 D

B.E. MECHATRONICS

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Wednesday, 20/03/2024	Internet of Things	417548
Thursday, 21/03/2024	Vibration Analysis & Control	417549
Tuesday, 26/03/2024	(ELECTIVE - V) App Development	417550 A
	(ELECTIVE - V) Rapid Prototyping	417550 B
	(ELECTIVE - V) Advanced Control Systems	417550 C
Wednesday, 27/03/2024	(ELECTIVE - VI) Industrial Robotics	417551 A
	(ELECTIVE - VI) Human Machine Interface	417551 B
	(ELECTIVE - VI) Electric Vehicles	417551 C

B.E. HONORS/MINORS

SEM-VIII

TIME: 02.00 PM TO 03.00 PM.

DAY & DATE	SUBJECT NAME	SUBJECT CODE
Thursday, 28/03/2024	Land Use and Land Cover	401403
	Tunnel Engineering	401303
	Brand and Packaging Management	408216
	Block Chain Solutions	404183 HBCT
	Artificial Intelligence in Robotics	404183 HR
	3D Printing Applications & Entrepreneurship	402016 MJ
	e-Vehicle Standards, Charging & Safety	302036 MJ
	Sustainable Energy Conversion Systems	402026 MJ
	Systems Engineering Management	302046 MJ
	Soft Computing and Deep Learning	410303
	Information Systems Management	410403
	Artificial Intelligence for Big Data Analytics	410503
	Internet of Things Security	410603
	Application Development using Augmented Reality and Virtual Reality	410703

Ganeshkhind, Pune - 411 007
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Director
Board of Examinations and Evaluation