

SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)



EXAMINATION CIRCULAR NO. 225 OF 2025

BACHELOR OF ENGINEERING (2019 PATTERN)

Examination of INSEM – Winter Session - 2025

(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)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Automotive Testing and Certification | 416481 |
| Wednesday 20/08/2025 | Machine and Vehicle Dynamics | 416482 |
| Friday 22/08/2025 | (ELECTIVE - III) Artificial Intelligence and Machine Learning | 416484A |
| | (ELECTIVE-III) Automotive Control Systems | 416484B |
| | (ELECTIVE-III) Internet of Things** | 402044E |
| Saturday 23/08/2025 | (ELECTIVE-IV) Finite Elements Analysis | 416485A |
| | (ELECTIVE-IV)Computational Fluid Dynamics | 416485B |

NOTE:COMMON WITH MECHANICAL ENGINEERING**

B.E. (BIOTECHNOLOGY ENGINEERING)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Biochemical Engineering | 415461 |
| Wednesday 20/08/2025 | Bioinformatics | 415462 |
| Friday 22/08/2025 | (ELECTIVE-III) Bioprocess Equipment Design | 415463A |
| | (ELECTIVE-III) Environmental Biotechnology | 415463B |
| | (ELECTIVE-III) Genomics | 415463C |
| Saturday 23/08/2025 | (ELECTIVE - IV) Bioenergy and Renewable Resources | 415464A |
| | (ELECTIVE-IV) Nanotechnology | 415464B |
| | (ELECTIVE - IV) Stem Cell Biology and Regenerative Medicine | 415464C |

B.E. (CHEMICAL ENGINEERING)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | Process Dynamics and Control | 409341 |
| Wednesday 20/08/2025 | Chemical Reaction Engineering-II | 409342 |
| Thursday 21/08/2025 | Chemical Engineering Design | 409343 |
| Friday 22/08/2025 | (ELECTIVE-III) Environmental Engineering | 409344A |
| | (ELECTIVE-III) Membrane Technology | 409344B |
| | (ELECTIVE-III) Industrial Piping | 409344C |
| | (ELECTIVE-III) Petroleum Refining | 409344D |
| Saturday 23/08/2025 | (ELECTIVE-IV) Chemical Process Synthesis | 409345A |
| | (ELECTIVE-IV) Industrial Management & Entrepreneurship | 409345B |
| | (ELECTIVE-IV) Green Technology | 409345C |
| | (ELECTIVE-IV) Advance Separation Processes | 409345D |

B.E. (CIVIL)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Foundation Engineering | 401001 |
| Wednesday 20/08/2025 | Transportation Engineering | 401002 |
| Friday 22/08/2025 | (ELECTIVE-III) Coastal Engineering | 401003A |
| | (ELECTIVE - III)Advanced Design of Concrete Structures (Time – 2.00 p.m. to 3.15 p.m.) | 401003B |
| | (ELECTIVE - III) Integrated Water Resources Planning & Management | 401003C |
| | (ELECTIVE-III)Finite Element Method | 401003D |
| | (ELECTIVE-III) Data Analytics | 401003E |
| | (ELECTIVE-III) Operation Research | 401003F |
| | (ELECTIVE-IV) Air Pollution and Control | 401004A |
| Saturday 23/08/2025 | (ELECTIVE-IV) Advanced Design of Steel Structures (Time–2.00p.mto3.15p.m.) | 401004B |
| | (ELECTIVE-IV) Statistical Analysis and Computational Method | 401004C |
| | (ELECTIVE-IV) Airport and Bridge Engineering | 401004D |
| | (ELECTIVE-IV) Design of Prestressed Concrete Structures (Time–2.00p.mto3.15p.m.) | 401004E |
| | (ELECTIVE - IV)Formwork and Plumbing Engineering | 401004F |

B.E. (COMPUTER ENGINEERING)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | Design and Analysis of Algorithms | 410241 |
| Wednesday 20/08/2025 | Machine Learning | 410242 |
| Thursday 21/08/2025 | Block chain Technology | 410243 |
| Friday 22/08/2025 | (ELECTIVE-III) Pervasive Computing | 410244A |
| | (ELECTIVE-III) Multimedia Techniques | 410244B |
| | (ELECTIVE-III) Cyber Security and Digital Forensics | 410244C |
| | (ELECTIVE - III) Object Oriented Modeling and Design | 410244D |
| | (ELECTIVE-III) Digital Signal Processing | 410244E |
| Saturday 23/08/2025 | (ELECTIVE-IV) Information Retrieval | 410245A |
| | (ELECTIVE-IV) GPU Programming and Architecture | 410245B |
| | (ELECTIVE-IV) Mobile Computing | 410245C |
| | (ELECTIVE - IV) Software Testing and Quality Assurance | 410245D |
| | (ELECTIVE-IV)Compilers | 410245E |

B.E. (MECHANICAL)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Heating Ventilation Air-Conditioning and Refrigeration | 402041 |
| Wednesday 20/08/2025 | Dynamics of Machinery (Time–2.00 p.m. to 3.15p.m.) | 402042 |
| Friday 22/08/2025 | (ELECTIVE-III) Automobile Design | 402044A |
| | (ELECTIVE - III) Design of Heat Transfer Equipments | 402044B |
| | (ELECTIVE-III) Modern Machining Processes | 402044C |
| | (ELECTIVE-III) Industrial Engineering | 402044D |
| | (ELECTIVE-III) Internet of Things | 402044E |
| | (ELECTIVE-III) Computational Fluid Dynamics | 402044F |
| Saturday 23/08/2025 | (ELECTIVE-IV) Product Design and Development | 402045A |
| | (ELECTIVE - IV) Experimental Methods in Thermal Engineering | 402045B |
| | (ELECTIVE-IV) Additive Manufacturing | 402045C |
| | (ELECTIVE-IV) Operations Research | 402045D |
| | (ELECTIVE - IV) Augmented Reality and Virtual Reality | 402045E |

B.E. (ELECTRICAL)

SEMESTER-VII

Time – 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Power System Operation & Control | 403141 |
| Wednesday 20/08/2025 | Advanced Control System | 403142 |
| Friday 22/08/2025 | (ELECTIVE-III) PLC and SCADA | 403143A |
| | (ELECTIVE-III) Power Quality Management | 403143B |
| | (ELECTIVE-III) High Voltage Engineering | 403143C |
| | (ELECTIVE-III) Robotics and Automation | 403143D |
| Saturday 23/08/2025 | (ELECTIVE-IV) Alternate Energy System | 403144A |
| | (ELECTIVE-IV) Electrical & Hybrid Vehicle | 403144B |
| | (ELECTIVE-IV) Special-purpose Machines | 403144C |
| | (ELECTIVE-IV) HVDC & FACTS | 403144D |

B.E. (ELECTRONICS)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | VLSI Design | 404201 |
| Wednesday 20/08/2025 | Advanced Power Electronics | 404202 |
| Thursday 21/08/2025 | Electronic System Design | 404203 |
| Friday 22/08/2025 | (ELECTIVE-III) Speech Processing* | 404184A |
| | (ELECTIVE-III) Internet of Things | 404204A |
| | (ELECTIVE-III) Software Defined Radio | 404204B |
| | (ELECTIVE - III) Testing and Verification for SOC design | 404204C |
| | (ELECTIVE-III) JavaScript* | 404184C |
| Saturday 23/08/2025 | (ELECTIVE-IV) Mobile Communication | 404205A |
| | (ELECTIVE-IV) Embedded Systems | 404205B |
| | (ELECTIVE-IV) Optimization Techniques | 404205C |
| | (ELECTIVE-IV) Low power CMOS* | 404185D |
| | (ELECTIVE-IV) Smart Antennas* | 404185E |

NOTE:* COMMON WITH E & TC.

B.E. (ELECTRONICS & TELE COMMUNICATION)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | Radiation & Microwave Theory | 404181 |
| Wednesday 20/08/2025 | VLSI Design and Technology | 404182 |
| Thursday 21/08/2025 | Cloud Computing | 404183 |
| Friday 22/08/2025 | (ELECTIVE-III) Speech Processing | 404184A |
| | (ELECTIVE-III) PLC SCADA & Automation | 404184B |
| | (ELECTIVE-III) JAVA Script | 404184C |
| | (ELECTIVE-III) Embedded & RTOS | 404184D |
| | (ELECTIVE-III) Modernized IoT | 404184E |
| Saturday 23/08/2025 | (ELECTIVE-IV) Data Mining | 404185A |
| | (ELECTIVE-IV) Electronic Product Development | 404185B |
| | (ELECTIVE-IV) Deep Learning | 404185C |
| | (ELECTIVE-IV) Low Power CMOS | 404185D |
| | (ELECTIVE-IV) Smart Antennas | 404185E |

B.E. (INFORMATION TECHNOLOGY)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Information and Storage Retrieval | 414441 |
| Wednesday 20/08/2025 | Software Project Management | 414442 |
| Thursday 21/08/2025 | Deep Learning | 414443 |
| Friday 22/08/2025 | (ELECTIVE-III) Mobile Computing | 414444A |
| | (ELECTIVE-III) High Performance Computing | 414444B |
| | (ELECTIVE-III) Multimedia Technology | 414444C |
| | (ELECTIVE-III) Smart Computing | 414444D |
| Saturday 23/08/2025 | (ELECTIVE-IV) Bioinformatics | 414445A |
| | (ELECTIVE-IV) Introduction to DevOps | 414445B |
| | (ELECTIVE-IV) Computer Vision | 414445C |
| | (ELECTIVE-IV) Wireless Communications | 414445D |

B. E. (INSTRUMENTATION & CONTROL)

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Process Control Techniques | 406261 |
| Wednesday 20/08/2025 | Project Engineering and Management | 406262 |
| Friday 22/08/2025 | (ELECTIVE-III) Digital Image Processing | 406263A |
| | (ELECTIVE-III) Data Analytics | 406263B |
| | (ELECTIVE-III) Wireless Sensor Networks | 406263C |
| | (ELECTIVE-III) Process Modelling and Optimization | 406263D |
| Saturday 23/08/2025 | (ELECTIVE-IV) Cloud Computing | 406264A |
| | (ELECTIVE-IV) Soft Computing | 406264B |
| | (ELECTIVE-IV) Automotive Instrumentation | 406264C |
| | (ELECTIVE-IV) Advanced Control System | 406264D |

B.E. PRINTING TECHNOLOGY

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Gravure Printing Techniques | 408283 |
| Wednesday 20/08/2025 | Digital Printing Techniques | 408284 |
| Friday 22/08/2025 | (ELECTIVE - III) Paper Board and Corrugation Package Technology | 408281A |
| | (ELECTIVE-III) Polymer Science | 408281B |
| Saturday 23/08/2025 | (ELECTIVE-IV) Multimedia Advertising | 408282A |
| | (ELECTIVE - IV) Process Optimization and Total Quality Management in Printing | 408282B |

B.E. PRODUCTION ENGINEERING

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Automation and Control Engineering | 411081 |
| Wednesday 20/08/2025 | Operations Research | 411082 |
| Friday 22/08/2025 | (ELECTIVE - III) Simulation, Modeling and Digital Twin | 411083A |
| | (ELECTIVE-III) Total Quality Management | 411083B |
| | (ELECTIVE - III) Artificial Intelligence in Manufacturing | 411083C |
| | (ELECTIVE-III) World Class Manufacturing | 411083D |
| Saturday 23/08/2025 | (ELECTIVE - IV) Plant Maintenance and industrial safety | 411084A |
| | (ELECTIVE-IV) Surface Engineering | 411084B |
| | (ELECTIVE-IV) Reverse Engineering | 411084C |
| | (ELECTIVE-IV) Entrepreneurship and Innovations | 411084D |

B.E. PRODUCTION SANDWICH ENGINEERING

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Manufacturing Automation | 411121 |
| Wednesday 20/08/2025 | Operations Research | 411122 |
| Friday 22/08/2025 | (ELECTIVE-III) Additive Manufacturing | 411123A |
| | (ELECTIVE-III) Industrial Robotics | 411123B |
| | (ELECTIVE-III) Reliability Engineering | 411123C |
| | (ELECTIVE-III) Micro-Electro mechanical systems | 411123D |
| Saturday 23/08/2025 | (ELECTIVE-IV) Creative Product Design | 411124A |
| | (ELECTIVE-IV) Mechatronics | 411124B |
| | (ELECTIVE-IV) CAD/CAM | 411124C |
| | (ELECTIVE-IV) Data analytics | 411124D |

B.E. ROBOTICS & AUTOMATION

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day& Date | SUBJECT (2019Course) | SUBJECT CODE |
|---------------------------------|---|-------------------------|
| Tuesday 19/08/2025 | Machine Vision System | 411501 |
| Wednesday 20/08/2025 | Robot System Reliability and Safety | 411502 |
| Friday 22/08/2025 | (Elective-III) Advanced Computational Techniques | 411503A |
| | (Elective-III) Wireless sensor network | 411503B |
| | (Elective-III) Microprocessor and microcontroller | 411503C |
| | (Elective-III) Ergonomics and work management | 411503D |
| Saturday 23/08/2025 | (Elective-IV) Computational Fluid Dynamics | 411504A |
| | (Elective -IV) Internet of Things and Machine Learning | 411504B |
| | (Elective -IV) Artificial Neural Networks and fuzzy systems | 411504C |
| | (Elective-IV)Power Electronics and Drives | 411504D |

B.E. ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

SEMESTER-VII

Time– 2.00p.m. to 3.00p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Information Retrieval in AI | 418541 |
| Wednesday 20/08/2025 | Cloud Computing | 418542 |
| Thursday 21/08/2025 | Deep Learning for AI | 418543 |
| Friday 22/08/2025 | (Elective-III) Quantum Computing | 418544A |
| | (Elective-III) Block Chain | 418544B |
| | (Elective-III) AI in Drones | 418544C |
| Saturday 23/08/2025 | (Elective-IV) Ethical Hacking and cyber forensics | 418545A |
| | (Elective-IV) Augmented Reality and Virtual Reality | 418545B |
| | (Elective-IV) DevOps in Machine Learning | 418545C |

B.E. AUTOMATION & ROBOTICS

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Industrial Automation & Control Systems | 402541 |
| Wednesday 20/08/2025 | Robotic Process Automation & Development | 402542 |
| Friday 22/08/2025 | (Elective-III) Robotics: Cognitive & Medical | 402544A |
| | (Elective-III) Microprocessors and Microcontrollers | 402544B |
| | (Elective-III) Modern Machining Processes | 402544C |
| | (Elective-III) Industrial Engineering | 402544D |
| | (Elective-III) Computational Fluid Dynamics | 402544E |
| Saturday 23/08/2025 | (Elective-IV) Lean Manufacturing | 402545A |
| | (Elective-IV) Project Management | 402545B |
| | (Elective-IV) Additive Manufacturing | 402545C |
| | (Elective-IV) Operations Research | 402545D |
| | (Elective-IV) Augmented Reality and Virtual Reality | 402545E |

B.E. ELECTRONICS AND COMPUTER ENGINEERING

SEMESTER-VII

Time–2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|---|---------------------|
| Tuesday 19/08/2025 | Data Science and Visualization | 410341 |
| Wednesday 20/08/2025 | Web Technology | 410342 |
| Thursday 21/08/2025 | Internet of Things | 410343 |
| Friday 22/08/2025 | (Elective-III) Big Data & Analytics | 410344A |
| | (Elective-III) Mobile Application Development | 410344B |
| | (Elective-III) Information and Cyber Security | 410344C |
| | (Elective-III) Digital Image Processing | 410344D |
| Saturday 23/08/2025 | (Elective-IV) Robotics & Automation | 410345A |
| | (Elective-IV) Human Computer Interface | 410345B |
| | (Elective-IV) Digital System Design | 410345C |
| | (Elective-IV) Augmented and Virtual Reality | 410345D |

B.E. ARTIFICIAL INTELLIGENCE & DATA SCIENCE

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | Machine Learning | 417521 |
| Wednesday 20/08/2025 | Data Modeling & Visualization | 417522 |
| Friday 22/08/2025 | (Elective-III) Quantum Artificial Intelligence | 417523A |
| | (Elective-III) Industrial Internet of Things | 417523B |
| | (Elective -III) Enterprise Architecture and Components | 417523C |
| | (Elective-III) Bioinformatics | 417523D |
| Saturday 23/08/2025 | (Elective-IV) GPU Programming and Architecture | 417524A |
| | (Elective-IV) Information Retrieval | 417524B |
| | (Elective-IV) UI/UX Design | 417524C |
| | (Elective-IV) Optimization Algorithms | 417524D |

B.E. MECHATRONICS

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | Robot Operating System | 417541 |
| Wednesday 20/08/2025 | Data Communication | 417542 |
| Thursday 21/08/2025 | Micro Electro Mechanical Systems | 417543 |
| Friday 22/08/2025 | (Elective -III) Image Processing and Computer Vision | 417544-A |
| | (Elective-III) Medical Mechatronics | 417544-B |
| | (Elective-III) Virtual Instrumentation | 417544-C |
| Saturday 23/08/2025 | (Elective-IV) Product Design and Development | 417545-A |
| | (Elective-IV) Operation Research | 417545-B |
| | (Elective-IV) Industry4.0 | 417545-C |

B.E. COMPUTER SCIENCE AND DESIGN

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|---------------------------------|--|---------------------|
| Tuesday 19/08/2025 | Computer Vision | 418241 |
| Wednesday 20/08/2025 | Deep learning | 418242 |
| Thursday 21/08/2025 | Game Design and Development | 418243 |
| Friday 22/08/2025 | (Elective -III) Object Oriented Modelling and Design | 418244-A |
| | (Elective -III) Software Testing and Quality Assurance | 418244-B |
| | (Elective-III) Block chain Technology | 418244-C |
| | (Elective-III) Information Retrieval | 418244-D |
| Saturday 23/08/2025 | (Elective-IV) Natural Language Processing | 418245-A |
| | (Elective -IV) Software Development for Portable devices | 418245-B |
| | (Elective-IV) Compiler Design | 418245-C |
| | (Elective-IV) Advanced UI/UX Design | 418245-D |

B.E. HONORS/MINORS

SEMESTER-VII

Time– 2.00 p.m. to 3.00 p.m.

| Day & Date | SUBJECT (2019 Course) | SUBJECT CODE |
|------------------------------|--|---------------------|
| Monday 25/08/2025 | Traffic and Transportation Planning | 401401 |
| | Work Method Statement Making | 401301 |
| | Sustainable Packaging | 408214 |
| | Smart Contracts & Cryptocurrency | 404181HBCT |
| | Industrial Robotics & Automation | 404181HR |
| | Additive Manufacturing System Design | 402014MJ |
| | Modelling and Simulation of EHV | 302034MJ |
| | Electrical Energy Systems | 402024MJ |
| | System modeling and simulation | 302044MJ |
| | Machine Learning | 410301 |
| | Internet of Things and Embedded Security | 410401 |
| | Machine Learning and Data Science | 410501 |
| | Machine Learning for Internet of Things | 410601 |
| | Virtual Reality in Game Development | 410701 |

Ganeshkhind, Pune-411007
Ref./Exam/ Coord/686
Date: 04/08/2025

Director
Board of Examinations & Evaluation