UNIVERSITY OF PUNE

EXAMINATION CIRCULAR No - 79 of 2012

Programme of the M.E. Course (Four - Semester) (2002 Course) (All Branches) (Civil, Mechanical, Elect. & Telecom., Electronics, Electrical, Production, Computer, Petroleum, Instrumentation Process & Biomedical Instrumentation, Computer Science & Engineering(IT), Computer Science Information Technology, Industrial, Chemical and Polymer Engineering Examination, December, 2012.

	Instructions :
1.	Candidates are required to be present at the respective place of examination fifteen minutes before the time fixed for the first Paper & ten minutes before the time of each subsequent Paper.
2.	Candidates are forbidden from taking any material into the examination hall that can be used for malpractice at the time of examination.
3.	Use of Non-programmable Electronic Calculator is only allowed.
4.	No request for any Special Concession, such as change in time or any day fixed for the University examination, on religious or any other ground shall be granted.
5.	The Centre and Place of the examination of respective branches will be as follows :

Sr. No.	Name of the Colleges	Pune Centre/Place
1.	Govt. C.O.E, Shivajinagar, Pune-411005	**D.Y. Patil College of Engineering, Pimpri, Pune – 18** (All students of Pune Centre for Civil, Mechanical, Computer, Computer Network Branches)
2.	M.I.T COE, Paud Road., Pune – 38.	
3.	V.I.T., Bibvewadi, Pune-411037	
4.	P.I.C.T. Pune – 411043	
5.	P.V.G.'s C.O.E & Tech., Pune-411009	
6.	Dr. D. Y. Patil C.O.E Akurdi, Pune 411044	
7.	Sinhgad Inst.Tech. Vadgaon Bk., Pune -41	
8.	R.Shahu C.O.E, Tathawade, Pune-411033	**P.V.G.'s College of Engineering & Technology, Pune-411009.** (All students of Pune Centre for All Branches other than Civil, Mechanical, Computer, Computer Network Branches)

Ahmednagar Center

Sr. No.	Name of the Colleges	Centre / Place
1.	Pravara Rural College of Engineering, Loni	**All Branches** at **Pravara Rural College of Engineering, Loni, Tal. Rahata, Dist. Ahmednagar.**
2.	College of Engineering, Kopargaon	
3.	Amrutvahini C.O.E, Sangamner.	

Nashik Center

Sr. No.	Name of the Colleges	Centre / Place
	KK Wagh College of Engineering, Nashik.	**All Branches** at **KK Wagh College of Engineering, Nashik - 422003**

6.   The Written Examination will be conducted in the following order :

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	(Civil) 2002 Course		
	Construction and Management 1	Hydraulic Engineering 2	Structures 3
Saturday, 01.12.2012	*Statistical Analysis and Computational Methods Elective – II (510110)	Computational Methods in Hydraulic Engg. (501301)	*Numerical Methods and Finite Element Methods (501501)
Monday, 03.12.2012	*Construction Equipment and Material Management (501102)	Hydrology and Ground	*Earthquake Resistant Design of Structure (501507)
Tuesday, 04.12.2012	*Management and Project Planning in Construction (501101)	Fluid Mechanics (501302)	*Advanced Structural Mechanics (501503)
Wednesday, 05.12.2012	*Project Economics and Financial Management (501108)	Sediment Transport and River Mechanics (501307)	*Plates and Shells (501506)
Friday, 07.12.2012	*Construction Materials and Materials Management (501103)	*Irrigation and Drainage (501303)	*Reinforced Concrete Priestesses Concrete Design (501502)
Saturday. 08.12.2012	*Operation Research (501109)	Concrete Earth & Rock fill Dams (501308)	*Advanced Design of Steel Structures (501508)
Tuesday, 11.12.2012	*Construction Techniques (501104)	*Free Surface Flow (501304)	*Structural Dynamics (501504)
Wednesday, 12.12.2012	*Professional Practices in Construction (501507)	Systems Engg. (501309)	---
Thursday, 13.12.2012	Elective I (501106) * (a) Concrete Technology * (b) Construction Safety * (c) Adv. Constru. Engg. * (d) Human Resource Develop. in Constru. * (e) High Rise Structural and Building Services	Elective (501310) (a) Pipeline Hydraulic (b) Coastal Engineering (c) Computer aided design of Hydraulic structure (d) Water Resources Engg.	Elective I (501509) *(a) Bridge Engineering *(b) Experimental Stress Analysis *(c) Non-Linear Analysis of Structures *(d) Structural Optimization
Friday, 14.12.2012	Elective II (501110) * (a)Value Engineering & Risk Analysis * (b)Infra Structure Development & Internal Contracting * (c)Rehabilitation Disaster Management * (d) TQM & MIS in Construction	Open Channel Hydraulic (501302)	Elective II (501510) * (a) High Rise Structures *(b) Structural Stability * (c) Structural Reliability * (d) Advance in Concrete Composites

*Note : **Papers marked are of four hours' duration (between 2-30 p.m. to 6-30 p.m.)**

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	(Mechanical) 2002 Course			
	Heat Power Engineering 4	Design Engineering 5	Design Engineering (Old) 6	Weapon Old 7
Saturday, 01.12.2012	Numerical Methods and Computational Tech. (502101)	Numerical Methods and Computational Techniques (502101)	Numerical Methods and Computational Tech. (502101)	Numerical Methods and Computational Tech. (502101)
Monday, 03.12.2012	Advanced Fluid Mechanics (502106)	Design Engineering	Design Engineering (502204)	Explosives Propellants and Pyrotechnics (502703)
Tuesday, 04.12.2012	Instrumentation and Automatic Control (502102)	Instrumentation and Automatic Control (502102)	Instrumentation and Automatic Control (502102)	Instrumentation and Automatic Control (502102)
Wednesday, 05.12.2012	Thermal & Mechanical Design of Heat Exchangers(502107)	Material Handling Equipments Design Elective II	Material Handling Equipments Design Elective I	Design of Ordnance Basic Structure and Super Structure (502704)
Friday, 07.12.2012	Advanced Thermodynamics (502103)	M/C Stress Analysis (502201)	M/C Stress Analysis (502201)	Material Science and Technology (502301)
Saturday. 08.12.2012	Energy Conservation and Management (502108)	Analysis and Synthesis of Mechanism	Analysis and Synthesis of Mechanism (502206)	Ammunition (502705)
Tuesday, 11.12.2012	Advanced Heat Transfer (502104)	Mechanical Vibrations (502202)	Mechanical Vibrations (502202)	Ballistics (502701)
Wednesday, 12.12.2012	**Elective I (502109)** (1) I.C. Engine I (2) Environmental Pollution & Control (3) Advanced Refri .& Cryogenics (4) Theory & Design of Pumps Blowers & Compressors	**Elective I** (1) Machine Tool Design (2) Process Equipment Design (3) Robotics	**Elective I (502207)** a) Machine Tool Design b) Process Equipment Design	**Elective I** (a) Weapon System Production and Quality assurance (b) Tank Weapon and Amour (502706)
Thursday, 13.12.2012	**Elective II (502110)** (1) I.C. Engine II (2) Non- Conventional Energy Sources (3) Advanced Air Condi. Heating (4)Gas Turbines	**Elective II** (1) Reliability Engineering (2) Computer Aided Design	**Elective II (502208)** a) Manufacturing Engineering & Tech. b) Industrial Drives & Systems Design c) Adv. Welding Tech.	**Elective II** (a) Weapon Thermo-dynamics, Heat Transfer and Weapon Dynamics (b) Small Arms and cannons (502707)
Friday, 14.12.2012	---	Tribology	Tribology (502105)	---

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	(E & TC) 2002 Course			
	Instrumentation	Instrumentation (Old)	Microwave	V.L.S.I. & Embedded System
	8	9	10	11
Saturday, 01.12.2012	Embedded System Design (504107)	Estimation and Coding of Signals (504101)	Statistical Signal Analysis & Stochastic Processes (504201)	Analog & Digital CMOS IC Design
Monday, 03.12.2012	---	Advanced Microcontroller Techniques (504106)	Multiple Access Communication Systems (504206)	System Design Using PLDS.
Tuesday, 04.12.2012	Communication Networks (504104)	Optical Communication (504102)	Communication Networks (504104)	Embedded System Design
Wednesday, 05.12.2012	Intelligent Instrumentation (504106)	Electronic Instrumentation (504107)	---	Fault Tolerant System Design
Friday, 07.12.2012	Advanced DSP (504102)	Advanced Digital Signal Processing (504103)	Advanced DSP (504102)	Real Time Operating Systems
Saturday. 08.12.2012	Machine Vision Systems (504108)	Data Networks (504108)	RF and Microwave Circuit Design (504204)	Embedded Signal Processing
Tuesday, 11.12.2012	Digital Control System (504103)	Active Network Synthesis (504104)	Antenna & Radiating Systems (504202)	ASIC Design and Modeling
Wednesday, 12.12.2012	VLSI Design (504101)	**Elective I (504109)** a) Biomedical Instrumentation b) VLSI Design	Microelectronics (504205)	**Elective I** (a) RF IC Design (b) Design of Semiconductor Memories
Thursday, 13.12.2012	**Elective I (504109)** (1) Reconfigurable Computing (2) High Performance Networks	**Elective II (504110)** a) Digital Control and Industrial Applications b) Image Processing Techniques	**Elective I (504207)** (1) Machine vision and Pattern Analysis (2) Network Security Systems	**Elective II** (a) Reconfigurable Computing (b) Case Studies in Embedded System
Friday, 14.12.2012	**Elective II (504110)** (1) Industrial drives and control (2) Biomedical Instrumentation	---	**Elective II (504208)** (1) Integrated optics & Optical Communication (2) Continuous speech Processing	---

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	(Electronics) 2002 Course	
	Digital Systems 12	Computer 13
Saturday, 01.12.2012	Embedded System Design (504303)	Embedded System & Software (504402)
Monday, 03.12.2012	Advanced Digital System Design (504306)	---
Tuesday, 04.12.2012	---	Software Metrics (504401)
Wednesday, 05.12.2012	Multimedia Techniques (504307)	Multimedia Systems (504406)
Friday, 07.12.2012	D.S.P. & Application (504302)	D.S.P. and Application (504302)
Saturday. 08.12.2012	**Elective I (504309)** (a) Parallel Computing (b) Image Processing & Pattern Recognition	Parallel processing Systems (504404)
Tuesday, 11.12.2012	Computer Networks (504304)	Computer Networks (504304)
Wednesday, 12.12.2012	Microelectronics (504301)	Systems on Chip (504405)
Thursday, 13.12.2012	**Elective II (504310)** (a) Reconfigurable Computing (b) Expert Systems	**Elective I (504407)** (1) Artificial Intelligence & Expert Systems (2) High Performance Computer Networks
Friday, 14.12.2012	Network Security Systems (504308)	**Elective II (504408)** (1) Compiler Construction (2) Applied Algorithms

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	(Electrical) 2002 Course	
	Control Systems 14	Power System 15
Saturday, 01.12.2012	Microcontroller & Application in Control System (503107)	Microcontroller & Application in Power System (503107)
Monday, 03.12.2012	Identification & Adaptive Control (503108)	Power System Protection
Tuesday, 04.12.2012	Optimization Techniques & Control (503106)	Power System Modeling (503203)
Wednesday, 05.12.2012	Intelligent Control (503109)	Power System Planning and Reliability
Friday, 07.12.2012	Non-Linear Control System (503102)	Computer Application in Power System (503202)
Saturday. 08.12.2012	Automation & Robotics Elective (503110)	Power System Operation and Control
Tuesday, 11.12.2012	Digital Control System (503101)	High Voltage Power Transmission (503204)
Wednesday, 12.12.2012	Computer Method in Control System (503104)	Power System Dynamics
Thursday, 13.12.2012	**Elective (503110)** (1) Digital Signal Processing (2) Process Control	**Elective** (1) Special Topics in High Voltage Engg. (2) Power Sector Economics Regulation & Restructuring (3) Advanced Microprocessor & Application (4) Power System Harmonics (5) Renewable Energy Systems (6) Artificial Neural Network & Fuzzy System
Friday, 14.12.2012	(1) Multivariable Control System (503103)	---

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	(Production) 2002 Course Production 16	(Computer) 2002 Course Computer 17	(Petroleum) 2002 Course Petroleum 18
Saturday, 01.12.2012	Advanced Mathematical Method	Embedded System Design Elective II	Numerical Method and Simulation in Petroleum Engineering
Monday, 03.12.2012	Hard and Soft Automation	Advanced Database Management Systems	Geographical Information Systems and Computer Application in Petroleum Industry
Tuesday, 04.12.2012	Microprocessor	Distributed Operating System	Horizontal & Multilateral Drilling
Wednesday, 05.12.2012	Robotics and its Industrial Applications	Mobile Computing	---
Friday, 07.12.2012	Advanced Machine Tool Design	Advanced Computer Architecture	Artificial Lift & Stimulation Techniques
Saturday. 08.12.2012	C.I.M. Advanced Manufacturing Processes	Geometric & Solid Modeling	Reservoir Characterization & Management
Tuesday, 11.12.2012	CAD-CAM-FMS	Advanced Computer Network	Environment Management Technology & Safety Procedures
Wednesday, 12.12.2012	**Elective I** (1) Advanced Welding Techniques (2) Human Factors in Design and Manufacturing	**Elective I** (1) Network Security (2) Intelligent Systems (3) Speech Processing	**Elective II** (a) Advanced Natural Gas Engg. & Technology (b) Technology of Coal Bed Methance (c) Technology of Gas Hydrates (d) Analytical Techniques in Petroleum Geochemistry (e) International Business Strategies & Risk Analysis
Thursday, 13.12.2012	**Elective II** (1) Precision Engineering (2) Teri technology and Maintenance Management (3) Reliability Engineering	**Elective II** (1) Advances in Computer Techniques (2) Computer Vision (3) Bio-Informatics	**Elective I** (a) Well Control (b) Well Testing & Analysis (c) Reservoir Monitoring & Log Analysis (d) Advanced Heological Methods in Exploration & Production (e) Advanced Reservoir Petro-physics (f) Enhanced Oil Recovery
Friday, 14.12.2012	(2) Tribology Elective	Applied Algorithms	Offshore Technology

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Instrumentation, Process & Biomedical	Computer Science & Engineering (I.T.)	Computer Science Information Technology
	Instrumentation, Process & Biomedical 19	Computer Science & Engineering (I.T.) 20	Computer Science I.T. 21
Saturday, 01.12.2012	Advanced Mathematics (506101)	Operating System	Operating System
Monday, 03.12.2012	Control System (506106)	Advance - Database	Advance - Database System
Tuesday, 04.12.2012	Advanced Electronic Instrumentation (506103)	Software Engineering	Software Engineering
Wednesday, 05.12.2012	Application of DSP (506107)	Mobile Computing	Mobile Computing
Friday, 07.12.2012	Transducer Design (506102)	Net Centric Computing	Net Centric Computing
Saturday. 08.12.2012	Artificial Intelligence & Robotics (506104)	Human Computing Interface	Human Computing Interface
Tuesday, 11.12.2012	1. Micro-Controller Application in Instrumentation (506108)	Adv. Internet Tech.	Adv. Internet Tech.
Wednesday, 12.12.2012	1. Advanced Medical Instrumentation (506116) 2. Advanced Process Instrumentation (506109)	**Elective I** (a) Operation Research & Stats (b) Intelligent Systems (c) Object Oriented Systems (d) Computer Algorithms for Signal Processing	**Elective I** (a) Operation Research & Stats (b) Intelligent Systems (c) Object Oriented Systems (d) Computer Algorithms for Signal Processing
Thursday, 13.12.2012	**Elective (506117)** **1. Bio - Medical Instrumentation** (a) Ultrasonic Application in Bioengineering (b) Lasers in Medicine (c) Bioinformatics	**Elective II** (a) Embedded Systems (b) Data Ware Housing & (c) ERP-EC (d) Bio-Informatics	**Elective II** (a) Embedded Systems (b) Data Ware Housing & (c) ERP-EC (d) Bio-Informatics
Friday, 14.12.2012	**Elective (506110)** **2. Process Instrumentation** (a) Applied Instrumentation (b) Advance Techniques in Modeling & Optimization (c) Instrumentation for Strategic Application	---	---

Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Industrial Engg. Industrial Engineering 22	Chemical Engg. Chemical Engineering 23	Polymer Engg. Polymer Engineering 24
Saturday, 01.12.2012	Advanced Statistical Method	Advanced Momentum & Heat Transfer (109101)	Mathematical & Statistical Method (509201)
Monday, 03.12.2012	Operation and Management	Advanced Mass Transfer (109106)	Advanced Polymer Compounding & Processing (509206)
Tuesday, 04.12.2012	Human Factors Engineering	Advanced Thermodynamics (109102)	Polymer Reaction Engineering (509202)
Wednesday, 05.12.2012	Design of Manufacturing System	Advanced Chemical Reaction Engineering (109107)	Structure Properties & Testing of Polymers (509207)
Friday, 07.12.2012	Industrial Psychology	Process Modeling & Simulation (109103)	Polymer Physics & Characterization (509203)
Saturday. 08.12.2012	Financial Management	Advanced Process Dynamics & Control (109108)	Design & Processing of Composites (509208)
Tuesday, 11.12.2012	Advance Operations Research	Novel Separation Techniques (109104)	Transport Phenomena in Polymers (509204)
Wednesday, 12.12.2012	Quality & Reliability Engineering	**Elective I** Catalysis and Surface Phenomena (109109)	**Elective I** (a) Specialty Polymer Materials (b) Modeling and Simulation (c) Computer Aided Tool and Product Design (509209)
Thursday, 13.12.2012	Software Engineering	**Elective II** Fluidization Engineering (109110)	**Elective I** (a) Advanced Elastomer Technology (b) Science and Engineering of Fibers (c) Recent Advances in Polymer Science (509210)
Friday, 14.12.2012	Organizational Development	---	---

University of Pune
Ganeshkhind, Pune-411007
Ref. No. XCT/ 1246
Date : 09/11/2012

Dr. Sampada Joshi
Controller of Examinations.