

UNIVERSITY OF PUNE



EXAMINATION CIRCULAR No. 218 of 2011

Programme of the M.E. (Sem. I & II)2008 Course(All Branches) Civil, Civil(Environment Engg.),Mechanical, Mechanical (Mechatronics) ,Mechanical (Automotive Engg),Electrical, Electrical (Power Electronics & Drives),Electronics & Telecom., Electronics & Telecom.,(Signal Processing), Electronics & Telecom. (Communication Networks),Electronics,Production Engg., Production (CAD/CAM) , Computer Engg/Computer Networks, Chemical, Chemical(Environmental Engg.),Petroleum,Information Technology, Industrial Engg,,Instumentation & Control (Process Instru. & Biomedical Instru.) ,Polymer, Printing Engg.

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	Centre / Place
1.	Govt. C.O.E, Shivajinagar, Pune-411005	DY Patil College of Engineering, Pimpri, Pune – 18 (All students of Pune Centre for Civil, Mechanical, Computer, Computer Networks Branches) 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)
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.	Cummins C.O.E, Karvenagar, Pune 411052	
8.	AISSMS, COE Pune 411001.	
9.	Sinhgad Inst.Tech. Vadgaon Bk., Pune -41	
10.	R.Shahu C.O.E, Tathawade, Pune-411033	
11.	P.E.S'S Society Coll. Of Engg. Pune 411005	
12.	M.A.E Alandi, C.O.E ., Dist: Pune	
13.	M.I.T COE, Paud Road., Pune – 38.	
14.	SAE, Kondhawa (BK) Pune – 48.	
15.	D.Y. Patil I.E.T. Pimpri , Pune 411018	
16.	K.K.Wagh College Of Enginerring, Nasik	
17.	G.H. Raisonni, C.O.E Wagholi, Pune	
18.	G.S. Moze, C.O.E., Balewadi, Pune- 411045	
19.	Sinhgad Inst. Of Tech., Lonavala	
20.	S.K. Navale, Vadgoan Bk, Pune – 41	
21.	V.P. MIDC, Baramati, Dist. Pune.	

Ahmednagar Center

1.	Pravara Rural College of Engineering, Loni	} All Branches Pravara Rural College of Engineering, Loni, Tal. Rahata, Dist. Ahmednagar.
2.	College of Engineering, Kopargaon	
3.	Amrutvahini C.O.E, Sangamner.	
4.	Pad. Dr. V.Vikhe Patil College of Engineering, Viladghat, Ahmednagar	

Nashik Center

Sr. No.	Name of the Colleges	Centre / Place
1.	KK Wagh College of Engineering, Nashik.	} KK Wagh College of Engineering, Nashik.
2.	SND College of Engg. Yeola, Dist.Nashik.	
3.	Matoshri Edu. Soc.'s Coll. of Engg. & Res. Center, Dist. Nashik.	
4.	Sandip Foundation Inst. of Tech. & Res. Center, Dist. Nashik.	
5.	Sapkal Knowledge of Engg. Trimbakwshwar Road, Nashik.	
6.	Sir Vishveshwariya Coll. of Engg., Chincholi, Tal. Sinner, Dist. Nashik.	

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

ME Civil 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Construction Managet. 2008 Course	Geotechnical 2008 Course	Hydraulics 2008Course	Structure 2008 Course
Thursday, 08.12.2011	*Mathematics (501101)	Numerical Methods (501201)	Computational Methods in Hydraulics (501301)	*Structural Mathematics (501401)
Saturday, 10.12.2011	*Management & Project Planning in Construction (501102)	System Approach to Management & Development of Human Resources (501202)	Water Resource Planning & Management (501302)	*Advanced Soil Mechanics (501402)
Tuesday, 13.12.2011	*Construction Technology (501103)	Engineering Behavior of soils (501203)	Fluid Mechanics (501303)	*Structural Dynamics (501403)
Thursday, 15.12.2011	<p>*Elective-I (501104)</p> <p>*a) New Construction Materials</p> <p>*b)Disaster Management</p> <p>*c) Repairs Rehabilitation, Retro.of Structures</p> <p>*d) Construction Safety</p>	<p>Elective-I (501204)</p> <p>a) Applied Soil Mechanics</p> <p>b) Site Investigations & Ground Improvement</p> <p>c) Rock Mechanics & Tunnelling</p> <p>d) Shallow and Deep Foundation</p>	<p>Elective-I (501304)</p> <p>a) Remote Sensing & GIS in Water Resource Engineering</p> <p>b) Dam Engineering</p> <p>c) Systems Techniques in Water Resource Engineering</p>	<p>*Elective-I (501404)</p> <p>*a) Advanced Design of concrete Structures</p> <p>*b) Structural Design of Concrete Bridges</p> <p>*c) Design of Composite Construction</p> <p>*d) Design of Foundations</p>
Saturday, 17.12.2011	<p>*Elective-II (501105)</p> <p>*a) Resources Management</p> <p>*b) TQM in Construction</p> <p>*c) Value Engineering</p> <p>*d) Project Risk Analysis & Mitigation Techniques</p>	<p>Elective-II (501205)</p> <p>a) Soil Stabilization</p> <p>b) Soil Structure Interaction</p> <p>c) Geoenvironmental Engineering</p> <p>d) Earth Pressure & Retaining Structures</p>	<p>Elective-II (501305)</p> <p>a) Closed Conduit Flow</p> <p>b) Hydro Informatics & Simulation</p> <p>c) Hydropower</p>	<p>Elective-II (501405)</p> <p>*a) Advanced Design of Metal Structures</p> <p>*b)Structural Design of Steel Bridges</p> <p>*c)Plastic Analysis & Design of Steel Structures</p> <p>*d) Design of Industrial Steel Structures</p>

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

ME Civil 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Construction Management 2008 course	Geotechnical 2008 Course	Hydraulic Engineering 2008 Course	Structure 2008 Course
Friday, 09.12.2011	*Construction Contracts Administration & Management(501108)	Finite Element Methods in Geotechnical Engineering (501208)	Open Channel Hydraulics (501308)	*Theory of Plates and Shells (501408)
Monday, 12.12.2011	*Project Economics & Financial Mgt. (501109)	Reinforce Earth and Geosynthetics (501209)	Hydrology (501309)	*Finite Element Method (501409)
Wednesday, 14.12.2011	*Operation Research (501110)	Foundation Design and Detailing (501210)	Sediment Transport & River Mechanics (501310)	*Management in Structural Engineering (501410)
Friday, 16.12.2011	*Elective – III (501111) *a) Advanced Construction Technology *b) Infrastructure Development *c) International Contracting	Elective III (501211) a) Slope Stability & Earth Dams b) Geotechnical Earthquake Engineering c) Foundation of Offshore Structures	Elective III – (501311) a) Irrigation & Drainage b) Coastal Engineering c) Water Management & Conveyance System	*Elective – III (501411) *a) Earthquake Resistant Design of Structures *b) Structural Stability *c) Structural Reliability *d) Non-linear Analysis of Structures
Monday, 19.12.2011	*Elective IV (Open) (501112) a) Trust areas in Project Management	Elective IV (Open) (501212)	Elective IV (Open) (501312)	*Elective IV (Open) (501412) a) *Biomaterials & BioMechanics b) Mechanics of Modern Materials c) Theory of Plasticity d) Optimization Techniques

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

ME Civil (Environmental Engg.)2008 Course Sem. I

Thursday, 08.12.2011	Numerical Methods and Applied Statistics (501501)
Saturday, 10.12.2011	Air Pollution and Control (501502)
Tuesday, 13.12.2011	Physico- Chemical Process for Water and Waste Water Treatment (501503)
Thursday, 15.12.2011	Elective –I(501504) a)Air and Water Quality Modeling b)Environmental Legislation and Management System c)Environmental Impact Assessment and Management
Saturday, 17.12.2011	Elective – II(501505) a)Occupation Safety and Health b)Principles and Design of Biological Treatment System c)Environmental Risk Assessment and Management

ME Civil (Environmental Engg.)2008 Course Sem. II

Friday, 09.12.2011	Industrial Waste Water Management (501508)
Monday, 12.12.2011	Environmental Chemistry and Microbiology(501509)
Wednesday, 14.12.2011	Solid Waste and Hazardous Waste Management(501510)
Friday, 16.12.2011	Elective – III (501511) a)Ground Water Contamination and Pollution Transport b)Agricultural Pollution Control and Environmental Biotechnology c)Environmental Sanitation
Monday, 19.12.2011	Elective-IV(501512) a) Open b)

ME Mechanical 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day & Date	Heat Power Engineering 2008 Course	Design Engineering 2008 Course
Thursday, 08.12.2011	Numerical Methods in Thermal & Fluid Engineering (502101)	Mathematical Modeling & Analysis (502201)
Saturday, 10.12.2011	Advanced Thermodynamics (502102)	Advanced Stress Analysis (502202)
Tuesday, 13.12.2011	Technology & Financial Management (502103) (Common to Design & Mechatronics)	Technology & Financial Management (502203)
Thursday, 15.12.2011	Elective-I (502104) a) Performance Assessment of Mechanical Equipments b) Refrigeration Technology c) Energy Conservation & Management d) Convective Heat Transfer Analysis	Elective-I (502204) a) Instrumentation & Automatic Control b) Advanced Material Science c) Optimization Techniques
Saturday, 17.12.2011	Elective-II (502105) a) Internal Combustion Engines b) Advanced Air Conditioning & Heating & Ventilation c) Conventional Power Plants d) Advanced Gas Dynamics	Elective-II (502205) a) Material Handling Equipment Design b) Process Equipment Design c) Robotics

ME Mechanical 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Advanced Heat Transfer (502108)	Vibration & Noise Control (502208)
Monday, 12.12.2011	Measurement Techniques and Data Analysis (502109)	Advanced Machine Design (502209)
Wednesday, 14.12.2011	Advanced Fluid Mechanics (502110)	Analysis & Synthesis of Mechanisms (502210)
Friday, 16.12.2011	Elective – III (502111) a) Internal Combustion Engines – fuels b) Cryogenic Engineering c) Non Conventional Power Plants	Elective – III (502211) a) Reliability Engineering b) Engineering Fracture Mechanics c) Computer Aided Engineering
Monday, 19.12.2011	Elective – IV (502112) a)Heat Exchanger System Design and Performance b)Computational Fluid Dynamics c)OPEN (SELF STUDY)**	Elective – IV (502212) a) Vehicle dynamics b) Industrial Tribology c) OPEN (SELF STUDY)**

ME Mechanical (Mechatronics) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	M.E. Mechanical(Mechatronics) Sem- I
Thursday, 08.12.2011	Applied Numerical Methods and Computational Techniques (502801)
Saturday, 10.12.2011	Mechanical of Electronic Measurements(502802)
Tuesday, 13.12.2011	Technology and Financial Management (502103) (Common to Mechanical)
Thursday, 15.12.2011	Elective - I((502804) a) Design of Machine Elements b) Digital Signal Processing c) Advanced Material Science
Saturday, 17.12.2011	Elective – II(502805) a) Control Systems b) Theory of Machines and Mechanisms c) Instrumentation & Automatic Control

ME Mechanical (Mechatronics) 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Microcontrollers (502808)
Monday, 12.12.2011	Industrial Automation (502809)
Wednesday, 14.12.2011	Drives & Actuators (502810)
Friday, 16.12.2011	Elective – III (502811) a) Computer Aided Design b) Robotics c) Automotive Electronics
Monday, 19.12.2011	Elective IV (502812) a)Embedded Systems b)Fuzzy Logic and Neural Networks c) Open (Self Study)

ME Mechanical (Automotive Engineering)2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Thursday, 08.12.2011	Mathematical Modeling & Analysis (502201)
Saturday, 10.12.2011	Automotive Engine Design (502301)
Tuesday, 13.12.2011	Technology and Financial Management (502103)
Thursday, 15.12.2011	Elective – I (502302) a) Advanced Heat Transfer b)Finite Element Method c)Advanced Hydraulics and Pneumatic Systems
Saturday, 17.12.2011	Elective – II (502303) a)Tribiology and Preventive Maintenance b)Automotive Safety and Regulations c)Automobile Air Conditioning

ME Mechanical(Automotive Engineering) 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Automotive Fuels and Emissions (502306)
Monday, 12.12.2011	Autoerotic (502307)
Wednesday, 14.12.2011	Fundamentals of Vehicle Dynamics (502308)
Friday, 16.12.2011	Elective – III (502309) a)Noise Vibrations and Harshness b)Automotive Materials c)Vehicle Aerodynamics
Monday, 19.12.2011	Elective – IV (502310) a)Computational Fluid Dynamics b)Automotive Chassis Design c)** Open Elective (Self Study)

ME Electrical 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Control System 2008 Course	Power System 2008 Course
Thursday, 08.12.2011	Advanced Mathematical Technique for Control System (503101)	Computer Applications in power Systems (503201)
Saturday, 10.12.2011	Process Control Management (503102)	Power Sector Economics, Management & Restructuring (503202)
Tuesday, 13.12.2011	Nonlinear Control System (503103)	Power System Modeling (503203)
Thursday, 15.12.2011	Elective-I (503104) a) Automation & Robotics b) Modeling & Dynamic System	Elective-I (503204) a) Digital Signal Processing & its Applications b) Advanced Power Electronics
Saturday, 17.12.2011	Elective-II (503105) a) Advanced Topics in Control Systems b) Computer Aided Control Systems Design c) SCADA System & Applications	Elective-II (503205) a) Artificial Intelligence & its Application in Power System b) Renewable Energy Sources

ME Electrical 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Multivariable & Optimal Control System (503108)	Power System Dynamics (503208)
Monday, 12.12.2011	System Identification & Adaptive Control (503109)	Power System Planning & Reliability (503209)
Wednesday, 14.12.2011	Advanced Digital Control Technique (503110)	High Voltage Power Transmission (503210)
Friday, 16.12.2011	Elective – III (503111) a)Robust Control Systems b)Stochhastics Dynamical Systems c)Large Scale System	Elective – III (503211) a)Digital Power System Protection b)Power Electronics Applications in Power Systems
Monday, 19.12.2011	Elective – IV (503112) a)Intelligent Control b)Advanced Drives & Control c)Open	Elective – IV (503212) a)Power Quality Assessment and Mitigation b)Partial Discharges in Electrical Power Apparatus c)Open

ME Electrical(Power Electronics & Drives) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Thursday, 08.12.2011	Modeling and Analysis of Electrical Machines (503301)
Saturday, 10.12.2011	Energy Management and Power Quality in Electrical Drives (503302)
Tuesday, 13.12.2011	Power Electronic Devices and Circuits (503303)
Thursday, 15.12.2011	Elective – I (503304) a) DSP and its Applications in Electri Drives b) Data Acquisition and Signal Conditioning c) Digital Simulation of Power Electronic Systems
Saturday, 17.12.2011	Elective – II (503305) a) FACTS and HVDC b) Harmonics and Their Mitigation

ME E & TC 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Microwave 2008 Course	VLSI Embedded System 2008 Course
Thursday, 08.12.2011	Electromagnetics & Antenna Theory (504222)	Analog & Digital CMOS IC Design (504181)
Saturday, 10.12.2011	Principles & Practices for IT Management (504182) (Common to VSLI, Electronics)	Principles & Practices for IT Management (504182)
Tuesday, 13.12.2011	RF Wave & Microwave Circuit Design (504223)	Embedded System Design (504183)
Thursday, 15.12.2011	Elective-I (504224) a) Applications of Microwaves to Radar & Satellite b) Digital Image processing & Analysis c) Communication Networks	Elective-I (504184) a) ASIC Design & Modeling b) Nanotechnology c) Machine Intelligence
Saturday, 17.12.2011	Elective-II (504225) a) Smart Antennas b) Speech Processing & Application c) Semiconductor Device Modeling & Technology	Elective-II (504185) a) Reconfigurable Computing b) Memory Technologies c) VLSI EDA Tools

ME E & TC 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Microwave 2008 Course	VLSI Embedded System 2008 Course
Friday, 09.12.2011	Microwave Integrated Circuits (504228)	Real Time Operating Systems (504188)
Monday, 12.12.2011	Signal Processing for Wireless Communication (504229)	Embedded Signal Processing (504189)
Wednesday, 14.12.2011	Mobile Communication – GSM and CDMA (504230)	RF IC Design (504190)
Friday, 16.12.2011	Elective – III (504231) a)Fiber Optic Communication b)System Design c)EMI and EMC Techniques	Elective – III (504191) a)Fault Tolerant System Design b)Biomedical Signals and Systems c)Advanced Digital System Design
Monday, 19.12.2011	Elective – IV (Open) (504232) Any one subject of Elective IV from the following Branches a)Electronics Engineering b)Computer Engineering c)Information Technology d)Software Project Management	Elective IV – (Open) (504192) a) Embedded Automotive Systems b) System – on Chip (SoC) c) Software Defined Radio

ME Electronics & Telecommunication (Signal Processing) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Electronics & Telecommunication (Signal Processing) 2008 Course Sem. I
Thursday, 08.12.2011	Liner Algebra & Random Processes (504501)
Saturday, 10.12.2011	Principles & Practices for I.T. Management (504182) (Common to E.& TC, V.L.S.I. & Electronic)
Tuesday, 13.12.2011	Signal Processing Techniques (504502)
Thursday, 15.12.2011	Elective-I (504503) a) Digital Image Processing b) Automotive Electronics c) Artificial Intelligence
Saturday, 17.12.2011	Elective-II (504504) a) Bio-Medical Signal Processing b) Wireless & Mobile Communication c) Smart Antennas

ME Electronics & Telecommunication (Signal Processing) 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Statistical Signal Processing (504507)
Monday, 12.12.2011	Advanced Digital Signal Processing (504508)
Wednesday, 14.12.2011	VLSI in Signal Processing (504509)
Friday, 16.12.2011	Elective – III: (504510) a)Acoustic & Speech Processing b)Digital Signal Compression c)Multimedia Techniques
Monday, 19.12.2011	Elective – IV (504511) a)Radar & Satellite Signal Processing b)Operating Systems & Open Source Systems c)Computer Vision

ME Electronics 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Digital System 2008 Course
Thursday, 08.12.2011	Microelectronics (504195)
Saturday, 10.12.2011	Principles & Practices for IT Management (504182)
Tuesday, 13.12.2011	Signal Processing Architectures (504196)
Thursday, 15.12.2011	Elective-I (504197) a) Fault Tolerant System Design b) Advanced Digital System Design c) Wireless & Mobile Technologies
Saturday, 17.12.2011	Elective-II (504198) a) Machine Intelligence b) Advanced Computing Architectures c) Memory Technologies

ME Electronics 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Embedded Systems (504201)
Monday, 12.12.2011	Communication Network and Security (504202)
Wednesday, 14.12.2011	Image Processing and Pattern Recognition (504203)
Friday, 16.12.2011	Elective – III (504204) a) Digital Systems using PLDs b) Biomedical Signals and Systems c) Embedded Video processing
Monday, 19.12.2011	Elective – IV (OPEN) (504205) a) Reconfigurable Computing b) Embedded Automotive Systems c) Digital Signal Compression

ME E & TC (Communication Networks)2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Thursday, 08.12.2011	Coding & Modulation Techniques (504601)
Saturday, 10.12.2011	Principles & Practices of IT Management (504182)
Tuesday, 13.12.2011	Modeling & Simulation of Communication Network (504602)
Thursday, 15.12.2011	Elective – I (504603) a)Microwave and Antenna Theory b)Signal Detection and Estimation c) Ad-hoc Networks
Saturday, 17.12.2011	Elective – II(504604) a) RF MRMs b)Network Architecture & Design c)Computational Electromagnetics

ME E & TC (Communication Networks) 2008Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Wired and Wireless Networks (504607)
Monday, 12.12.2011	Network Traffic Analysis and Qos (504608)
Wednesday, 14.12.2011	Wireless System Design (504609)
Friday, 16.12.2011	Elective – III ((504610) a)Wireless Sensor Networks b)Mobile Computing c)Network Security
Monday, 19.12.2011	Elective – IV (504611) a)Software Radio b)Neural Networks in Communication c)Hardware Platforms for Networking Applications

ME Production Engineering 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Production Engineering
Thursday, 08.12.2011	Mathematics and Statistics (511101)
Saturday, 10.12.2011	CAD/CAM/CIM (511102)
Tuesday, 13.12.2011	Advanced Manufacturing Processes (511103)
Thursday, 15.12.2011	Elective-I (511104) a) Advanced Mechatronics b) Reliability & Failure Analysis c) Supply Chain Management d) Advanced Machine Tool Design
Saturday, 17.12.2011	Elective-II (511105) a) Advance Robotics b) Sheet Metal Processing c) Tool and Die Design d) Engineering Economics & Accounting

ME Production Engineering 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Material Technology (511108)
Monday, 12.12.2011	Manufacturing Management (511109)
Wednesday, 14.12.2011	Industrial Automation (511110)
Friday, 16.12.2011	Elective – III (511111) a) Plastics Processing b) Product Life Cycle Management c) Welding & Joining d) Surface Treatment processes
Monday, 19.12.2011	Elective – IV (Open) (511112) a) Optimization Techniques b) Research Methodologies c) Intellectual Property Rights & Product Design d) Energy management

ME Production (CAD/CAM) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Thursday, 08.12.2011	Computer Aided Design (511201)
Saturday, 10.12.2011	Computer Aided Manufacturing (511202)
Tuesday, 13.12.2011	Optimization Techniques (511203)
Thursday, 15.12.2011	Elective I (511204) a)Advanced Stress Analysis b)Tribology & Surface Engineering c)Industrial Robotics & Artificial Intelligence d)Concurrent Product Design
Saturday, 17.12.2011	Elective – II (511205) a)Mechatronics b)Rapid Prototyping c)Energy Management d)CAD/CAM/CAE Software Development

ME Production (CAD/CAM) 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Computer Integrated Manufacturing (511208)
Monday, 12.12.2011	Finite Element Analysis (511209)
Wednesday, 14.12.2011	Advanced Mathematics (511210)
Friday, 16.12.2011	Elective –III: (511211) a)Product Life Cycle Management b)Advanced Materials and Processing c)Manufacturing System Design d)Quality & Reliability Engineering
Monday, 19.12.2011	Elective – IV :(511212) a)Computer Aided Process Planning b)Technology Management c)Design of Experiments & Research Methodology d)Computational Fluid Dynamics

ME Computer Engineering / Computer Networks 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Computer Engineering 2008 Course	Computer Networks 2008 Course
Thursday, 08.12.2011	Applied Algorithms (510101) (Common to Network Engineering)	NETWORK ENGINEERING Applied Algorithms (510301)
Saturday, 10.12.2011	Emerging Trends in Computer Architecture (510102) (Common to Network Engineering)	Emerging Trends in Computer Architecture (510302)
Tuesday, 13.12.2011	Principles & Practices for IT Management (510103) (Common to Network Engineering)	Principles & Practices for IT Management (510303)
Thursday, 15.12.2011	Elective-I (510104) a) Advance Software Engineering b) Intelligent Systems c) Internet Routing Design d) Mobile computing	Elective – I (510304) a)Internet Routing Design b)Advanced TCP / IP
Saturday, 17.12.2011	Elective-II (510105) a) Information & Network Security b) Advanced compilers c) Web Services and SOA d) Embedded System Design	Elective - II(510305) a)Wireless Technology b)Information Security Audit & Management

ME Computer Engineering / Computer Networks 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Distributed System (510108)	Operating System Design (510308)
Monday, 12.12.2011	High Performance Database System (510109) (Common to Network Engineering)	High Performance Database Systems (510309)
Wednesday, 14.12.2011	Network Design, Modeling and Analysis (510110)	Advanced Software Engineering (510310)
Friday, 16.12.2011	Elective – III (510111) a)Software Design and Architecture b)Pattern Recognition and Machine Vision c)Network Programming d)Advanced Internet Programming	Elective – III (510311) a)Network Programming b)Network Design, Modeling and Analysis
Monday, 19.12.2011	Elective – IV (510112) a)Software Project Management b)Infrastructure Management c)Data Warehousing and Data Mining d)Open Elective (Self Study)	Elective – IV (510312) a) Infrastructure Management b) Convergence Technology c) Open Elective (Self Study)**

ME Chemical 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Chemical Engineering 2008 Course
Thursday, 08.12.2011	Applied Statistics for Chemical Engineers (509101)
Saturday, 10.12.2011	Management of R & D in Chemical Industries (509102)
Tuesday, 13.12.2011	Advanced Separation Processes (509103)
Thursday, 15.12.2011	Elective-I (509104) a) Computational Fluid Dynamics b) Process Design & Synthesis c) Advanced Thermodynamics d) Computer Aided Design
Saturday, 17.12.2011	Elective-II (509105) a) Industrial Pollution Control b) Process Optimization c) Drugs & Pharmaceutical Engineering d) Fluidization Engineering

ME Chemical 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Process Modeling and Simulation (509108)
Monday, 12.12.2011	Advanced Transport Phenomena (509109)
Wednesday, 14.12.2011	Advanced Process Control (509110)
Friday, 16.12.2011	Elective – III (509111) a) Catalysis and Surface Phenomenon b) Advanced Reaction Engineering c) Mathematical Methods in Chemical Engineering d) Bioprocess Engineering
Monday, 19.12.2011	Elective – IV OPEN (509112) a)Catalysis and Surface Phenomenon b)Process Optimization c)Fuel Cells Technology

ME Chemical (Environmental Engg.) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Chemical Environmental Engg. 2008 Course
Thursday, 08.12.2011	Applied Statistics for Environmental Engineers (509131)
Saturday, 10.12.2011	Environmental Geosciences (509132)
Tuesday, 13.12.2011	Environmental Chemistry (509133)
Thursday, 15.12.2011	Elective-I (509134) a) Modeling of Environmental Systems b) Groundwater Contamination and Pollution Transport. c) Environmental Policies and Legislations d) Air and Noise Pollution Control
Saturday, 17.12.2011	Elective-II (509135) a) Membrane Technology in Environmental Engineering b) Environmental Auditing and EMS c) Agricultural Pollution and control d) Environmental Impact Assessment and Economics

ME Chemical(Environmental Engg.) 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Wastewater Treatment & Design (509138)
Monday, 12.12.2011	Solid Waste Management (509139)
Wednesday, 14.12.2011	Industrial Waste Treatment (509140)
Friday, 16.12.2011	Elective III (509141) a)Ecology and Risk Assessment b)Water Quality Modeling c)Modern Trends in Environmental Engineering d)Environmental Biotechnology
Monday, 19.12.2011	Elective IV (OPEN) (509142) Ground Water Contamination & Pollution Control

M.E.(Petroleum Engineering) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Petroleum Engineering
Thursday, 08.12.2011	Numerical Methods & Simulation in Petroleum Engineering (512101)
Saturday, 10.12.2011	Petroleum Reservoir Management (512102)
Tuesday, 13.12.2011	Horizontal Multilateral & Intelligent Wells (512103)
Thursday, 15.12.2011	Elective-I (512104) a) Advanced Geological Methods in Petroleum Exploration & Development b) Reservoir Petro-physics c) Oil & Gas Field Development d) Petroleum Business Strategies & Risk Analysis
Saturday, 17.12.2011	Elective-II (512105) a) Modern Completion Technology b) Well Design & Engineering c) Well Testing & Analysis d) Well control

ME(Petroleum Engineering)2008 Course Sem.II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	GIS and Computer Applications in Petroleum Industry (512108)
Monday, 12.12.2011	Environmental Management Technology and Safety Measures (512109)
Wednesday, 14.12.2011	Advanced Natural Gas Engineering (512110)
Friday, 16.12.2011	Elective – III (512111) a)Artificial Lift Techniques b)Advanced Stimulation Techniques c)Piping Design and Engineering
Monday, 19.12.2011	Elective – IV OPEN (512112) a)Technology of Coal Bed Methane b)Unconventional Hydrocarbon Resources and Development Strategies c)Advanced offshore Technology d)Open elective, can be taken from any branch of elective

ME Information Technology 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Information Technology
Thursday, 08.12.2011	Applied Algorithms (514421)
Saturday, 10.12.2011	Software Engineering Methodologies (514402)
Tuesday, 13.12.2011	Advance Operating Systems (514403)
Thursday, 15.12.2011	Elective-I (514422) a) Software Architecture(514404)(A) b) Real Time & Embedded System (514404)(B) c) Bioinformatics (514422)(C)
Saturday, 17.12.2011	Elective-II (514423) a) Information Assurance & Security (514405)(A) b) Network Programming (514422)(B) c) Geographical Information Systems (514405)(C)

M.E. Information Technology 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Net centric Computing (514426)
Monday, 12.12.2011	Advance Trends in Database Systems (514409)
Wednesday, 14.12.2011	Management Trends in Information Technology (514427)
Friday, 16.12.2011	Elective – III (514428) a) Internet and Web Technologies (514411)(A) b) Advanced Topics in Operating Systems (514411)(B) c) Mobile Computing and M Commerce (514411)(C) d) User Interface Design (514428) (D)
Monday, 19.12.2011	Elective – IV (514439) a) Internet Routing Design (514428)(A) b) Advance Network Programming (514412)(B) c) High Performance Computer Networks (514412)(C) d) Open Elective II (Self Study)**/Service Oriented Architecture (514429)(D)

M.E Industrial Engineering 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Industrial Engineering
Thursday, 08.12.2011	Economics (511201)
Saturday, 10.12.2011	Work Study & Ergonomics (511202)
Tuesday, 13.12.2011	Optimization Techniques & Simulation Modeling (511203)
Thursday, 15.12.2011	Elective-I (511204) a) Marketing Management b) Human Resource Management c) Entrepreneurship Development d) World Class Manufacturing
Saturday, 17.12.2011	Elective-II (511205) a) Facilities planning b) Network & Project Management c) Enterprise Resource Planning & Supply Chain Management d) System Engineering

ME Industrial Engineering 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Reliability Engineering & Research Methodology (511208)
Monday, 12.12.2011	Costing & Finance (511209)
Wednesday, 14.12.2011	Productivity Management (511210)
Friday, 16.12.2011	Elective – III (511211) (a)Human Factors Engineering b)Process Planning & Manufacturing Engineering' c)Management of Service Sector d)Industrial & Commercial law
Monday, 19.12.2011	Elective IV – OPEN (511212) a)Organizational Behavior b)Operations Management c)Product Design & Intellectual Property Rights d) Environmental Engineering & Energy Management.

Instrumentation & Control (Process Instru. Biomedical Instru.) 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Instrumentation & Control (Process Instru. Biomedical Instru.) 2008 Course Sem –I
Thursday, 08.12.2011	Transducer Design (5061101)
Saturday, 10.12.2011	Mathematical Methods in Instrumentation (5061102)
Tuesday, 13.12.2011	Communication Protocols for Instrumentation (5061103)
Thursday, 15.12.2011	Analytical Instrumentation (5061104)
Saturday, 17.12.2011	Elective : I (5061105) a)Industrial Automation (5061105) b)Building Automation (5061105) c)Geotechnical Instrumentation) (5061105) <u>Biomedical Instrumentation (5061201)</u> a)Fundamentals of Biomedical Instrumentation(5061201) b)Introduction to Physiology and Anatomy (5061201)

ME Instrumentation & Control (Process Instru. Biomedical Instru.) 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Friday, 09.12.2011	Control System Design (5061108)
Monday, 12.12.2011	Advanced Signal Processing (5061109)
Wednesday, 14.12.2011	Organisational Behaviour & Management (5061110)
Friday, 16.12.2011	Elective : II (5061111) a)Modern Control Theory ((5061111) b)Mechatronics (5061111) c)Robotics (5061111) d)Advance Process Instrumentation <u>Biomedical Instrumentation(5061204)</u> a)Biosignal Processing (5061204) b)Rehabilitation Engineering (5061204)
Monday, 19.12.2011	Elective : III (5061112) a)Advanced Process Instrumentation (5061112) b) Automobile Instrumentation (5061112) c)Open Elective <u>Biomedical Instrumentation*(5061205)</u> a)Bio-imaging Modality (5061205) b)Biophotonics (5061205) c) Open Elective

ME Polymer 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Polymer 2008 Course Sem. I
Thursday, 08.12.2011	Mathematical and Statistical Methods (509115)
Saturday, 10.12.2011	Principles of Management (509116)
Tuesday, 13.12.2011	Polymer Processing and Testing (509117)
Thursday, 15.12.2011	Elective I : (509118) a) Polymer Reaction Engineering b) Transport Phenomena in Polymers c) Synthesis and Chemistry of Polymers
Saturday, 17.12.2011	Elective II : (509119) a) Polymer Rheology b) Mold and Die Design c) Packaging Technology

ME Polymer 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Polymer 2008 Course Sem. II
Friday, 09.12.2011	Polymer Physics and Characterization (509122)
Monday, 12.12.2011	Polymer Structure and Properties (509123)
Wednesday, 14.12.2011	Processing and Mechanics of Composites (509124)
Friday, 16.12.2011	Elective – III: (509125) a) Science and Engineering of Fibres b) Polymer Product Design c) Specialty Polymer Materials
Monday, 19.12.2011	Elective - IV : (509126) (Open) a) Paints and Adhesives Elective IV b) Elastomer Technology c) Open

ME Printing 2008 Course Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Printing 2008 Course Sem. I
Thursday, 08.12.2011	Probability, Statistics & Queueing Theory (508101)
Saturday, 10.12.2011	Printing Technology Management (508102)
Tuesday, 13.12.2011	Modern Trends in Printing (508103)
Thursday, 15.12.2011	Elective-I (508104) a) Workflow Management in Printing Industry b) Printing & Packaging Materials c) Design of Experiments & Research Methodology
Saturday, 17.12.2011	Elective-II (508105) a) Digital Printing b) Entrepreneurship in Printing & Allied Fields c) Quality Control Systems & Productivity

ME Printing 2008 Course Sem. II
Time : 2.30 p.m. to 5.30 p.m.

Day and Date	Polymer 2008 Course Sem. II
Friday, 09.12.2011	Print Media Communications (508108)
Monday, 12.12.2011	Web Handling on Press (508109)
Wednesday, 14.12.2011	Substrate and Ink (508110)
Friday, 16.12.2011	Elective – III : (508111) a) Multimedia Systems and Communication b) Total Productive Maintenance in Printing c) Press Finger Printing
Monday, 19.12.2011	Elective – IV (508112) a) Open Elective (Self study) b) Advances in Converting and Packaging c) Analysis of Spot and Process inks

University of Pune
Ganeshkhind, Pune-411007
Ref. No. XCT/1281
Date : 23.11.2011

Dr. S. M. Ahire
Controller of Examinations