UNIVERSITY OF PUNE

EXAMINATION CIRCULAR No. 80 of 2012

Programme of the M.E. (Sem. I & II)2008 Course(All Branches) Civil, Civil(Environment Engg.), Civil (Water Resoruces and Environmental Engineering), Mechanical, Mechanical (Mechatronics) ,Mechanical (Automotive Engg), Mechanical (Energy Engineering), Mechanical [Computer Aided Design, Manufacture & Engineering (CADME)], 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. 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	Centre / Place
1.	Govt. C.O.E, Shivajinagar, Pune-411005	
2.	M.I.T COE, Paud Road., Pune – 38.	
3.	V.I.T., C.O.E. Bibvewadi, Pune-411037	
4.	P.I.C.T. C.O.E. 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. C.O.E.Vadgaon Bk., Pune -41	
10.	R.Shahu C.O.E, Tathawade, Pune-411033	**D.Y. Patil College of Engineering, Pimpri,**
11.	P.E.S'S Society C.O.E.. Pune 411005	**Pune – 18**
12.	M.A.E Alandi,C.O.E ., Dist: Pune	**(All students of Pune Centre ONLY FOR Civil,**
13.	M.I.T (Women) COE, Paud Road., Pune – 38.	**Mechanical, Computer, Computer Networks**
14.	SAE, C.O.E. Kondhawa (BK) Pune – 48.	**Branches)**
15.	D.Y. Patil I.E.T. C.O.E. Pimpri , Pune 411018	
16.	G.H. Raisoni, C.O.E Wagholi, Pune	
17.	G.S. Moze, C.O.E., Balewadi, Pune- 411045	
18.	Sinhgad Inst. Of Tech.,C.O.E. Lonavala	
19.	S.K. Navale, C.O.E.Vadgoan Bk, Pune – 41	
20.	V.P.C.O.E. MIDC, Baramati, Dist. Pune	
21.	P.C.M.C. C.O.E. Nigdi, Pune	
22.	Siddhant C.O.E.. Sudumbare, Pune	
23.	P.V.P. I.T.C.O.E. Bhavdhan Pune	**P.V.G.'s College of Engineering,& Technology,**
24.	J.S.P.M.'s Imperior C.O.E. Wagholi, Pune	**Pune-411009.**
25.	G.H.Raisoni C.O.E. & Tech. Wagholi , Pune	**(All students of Pune Centre for All Branches**
26.	J.S.P.M. Jayawantrao Sawant College of Engineering, Hadapsar, Pune	**OTHER THAN Civil, Mechanical, Computer,**
27.	MMM College of Engineering, Karvenagar, Pune	**Computer Network Branches)**
28.	Vishwakarma Institute of Information Technology, Kondhwa, Pune	
29.	Zeal Education Soceity's Dnyanganga College of Engineering, Narhe, Pune	
30.	Dhole Patil College of Engineering, Wagholi, Pune	
31.	JSPM Bhivrabai Sawant Inst. Of Tech. & Res. (for Women), Wagholi, Pune	
32.	K.J.College of Engineering, Pisoligaon, Pune	
33.	Sharadchandra Pawar College of Engineering, Dumbarwadi, Tal.Junnar, Dist. Pune	
34.	Dr.D.Y.Patil College of Engineering, Ambi	
35.	Alard College of Engineering & Management, Mulshi	
36.	Dr.D.Y.Patil Inst. Of Engg. & Tech., Ambi	
37.	Samanvay Pratishtahn Inst. Of Knowledge College of Engineering, Pimple-Jagtap	
38.	Dattakala Group of Inst. Faculty of Engineering, Swami Chincholi	
39.	Bhivrabai Sawant College of Engineering, Narhe, Pune	
40.	Dr.D.Y.Patil School of Engineering, Chahroli, Lohgaon, Pune	
41.	S.I.T. Rasiklal Dhariwal College of Engineering, Warje	
42.	S.I.T. S.K.N. Inst. Of Tech. & Sci., Kusgaon, Lonwala	

43.	Flora Inst. Of Tech., Khopi	
44.	S.I.T. N.B.N. Sinhgad Technical Inst. Campus, Ambegaon (Bk), Pune	
45.	Dr.D.Y.Patil School of Engineering Academy, Ambi	
46.	Indira College of Engineering, Tathawade, Pune	
47.	S.I.T. Sinhgad Institute of Tech. & Sci., Narhe, Pune	
48.	Trinity College of Engineerig, Pisoli, Pune	
49.	N.B.Navale College of Engineering, Kedgaon, Daund	

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.	
4.	Pad. Dr. V.Vikhe Patil College of Engineering, Viladghat, Ahmednagar	
5.	Vishwabharati College of Engineering, Jamkhed Rd., Sarola Baddi, Dist. Ahmednagar	

Nashik Center

Sr. No.	Name of the Colleges	Centre / Place
1.	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.	K. G.N. Sapkal College of Engineering,. Anjneri, Nasik	**All Branches at K.K. Wagh College of Engineering, Nashik.**
6.	Sir Vishveshwaraiya Coll. of Engg., Chincholi, Tal. Sinner, Dist. Nashik.	
7.	NDMVP B.G.Thakare College of Engineering, Nashik	
8.	M.E.T. Inst. Of Engineering, Adgaon, Nashik	
9.	S.N.J.B. College of Engineering, Neminagar, Chanwad	

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 Manget. 2008 Course	Geotechnical 2008 Course	Hydraulics 2008Course	Structure 2008 Course
Saturday, 01.12.2012	*Mathematics (501101)	Numerical Methods (501201)	Computational Methods in Hydraulics (501301)	*Structural Mathematics (501401)
Tuesday, 04.12.2012	*Management & Project Planning in Construction (501102)	System Approach to Management & Development of Human Resources (501202)	Water Resource Planning & Management (501302)	*Advanced Soild Mechanics (501402)
Friday, 07.12.2012	*Construction Technology (501103)	Engineering Behavior of soils (501203)	Fluid Mechanics (501303)	*Structural Dynamics (501403)
Tuesday, 11.12.2012	***Elective-I (501104)** *a) New Construction Materials *b)Disaster Management *c) Repairs Rehabilitation, Retro. of Structures *d) Construction Safety	**Elective-I (501204)** a) Applied Soil Mechanics b) Site Investigations & Ground Improvement c) Rock Mechanics & Tunnelling d) Shallow and Deep Foundation	**Elective-I (501304)** a) Remote Sensing & GIS in Water Resource Engineering b) Dam Engineering c) Systems Techniques in Water Resource Engineering	***Elective-I (501404)** *a) Advanced Design of concrete Structures *b) Structural Design of Concrete Bridges *c) Design of Composite Construction *d) Design of Foundations
Thursday, 13.12.2012	***Elective-II (501105)** *a) Resources Management *b) TQM in Construction *c) Value Engineering *d) Project Risk Analysis & Mitigation Techniques	**Elective-II (501205)** a) Soil Stabilization b) Soil Structure Interaction c) Geo-environmental Engineering d) Earth Pressure & Retaining Structures	**Elective-II (501305)** a) Closed Conduit Flow b) Hydro Informatics & Simulation c) Hydropower	**Elective-II (501405)** *a) Advanced Design of Metal Structures *b)Structural Design of Steel Bridges *c)Plastic Analysis & Design of Steel Structures *d) Design of Industrial Steel Structures

* 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
Monday, 03.12.2012	*Construction Contracts Administration & Management(501108)	Finite Element Methods in Geotechnical Engineering (501208)	Open Channel Hydraulics (501308)	*Theory of Plates and Shells (501408)
Wednesday, 05.12.2012	*Project Economics & Financial Mgt. (501109)	Reinforce Earth and Geo-synthetics (501209)	Hydrology (501309)	*Finite Element Method (501409)
Saturday, 08.12.2012	*Operation Research (501110)	Foundation Design and Detailing (501210)	Sediment Transport & River Mechanics (501310)	*Management in Structural Engineering (501410)
Wednesday, 12.12.2012	***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
Friday, 14.12.2012	***Elective IV (Open) (501112)** a) Trust areas in Project Management	**Elective IV (Open) (501212)**	**Elective IV (Open) (501312)** **a) Irrigation & Drainage**	***Elective IV (Open) (501412)** a) *Biomaterials & Bio-Mechanics 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
Time : 2.30 p.m. to 5.30 p.m.

Saturday, 01.12.2012	Numerical Methods and Applied Statistics (501501)
Tuesday, 04.12.2012	Air Pollution and Control (501502)
Friday, 07.12.2012	Physico- Chemical Process for Water and Waste Water Treatment (501503)
Tuesday, 11.12.2012	**Elective –I(501504)** a)Air and Water Quality Modeling b)Environmental Legislation and Management System c)Environmental Impact Assessment and Management
Thursday, 13.12.2012	**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
Time : 2.30 p.m. to 5.30 p.m.

Monday, 03.12.2012	Industrial Waste Water Management (501508)
Wednesday, 05.12.2012	Environmental Chemistry and Microbiology (501509)
Saturday, 08.12.2012	Solid Waste and Hazardous Waste Management (501510)
Wednesday, 12.12.2012	**Elective – III (501511)** a) Ground Water Contamination and Pollution Transport b) Agricultural Pollution Control and Environmental Biotechnology c) Environmental Sanitation
Friday, 14.12.2012	**Elective-IV(501512)** Open Elective a) Ground Water Contamination and Pollution Transport b) Environmental Sanitation

ME Civil (Water Resources & Environmental Engineering)(2012 Course) Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Saturday, 01.12.2012	Environmental Chemistry & Microbiology (501601)
Monday, 03.12.2012	Environmental Management (501602)
Wednesday, 05.12.2012	Advance Fluid Mechanics (501603)
Friday, 07.12.2012	**Elective – I (501604)** a) Ground Water Contamination & Transport b) Hydrology & Groundwater c) Air Pollution Engineering d) Solid & Hazardous Waste Management
Tuesday, 11.12.2012	**Elective-II (501605)** a) Unit Operation in Environmental Engineering b) Advance Water Treatment & Water Supply Engineering c) Remote Sensing & GIS System for Water Resources Management d) Planning and Management of Water Resources

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
Saturday, 01.12.2012	Numerical Methods in Thermal & Fluid Engineering (502101)	Mathematical Modeling & Analysis (502201)
Tuesday, 04.12.2012	Advanced Thermodynamics (502102)	Advanced Stress Analysis (502202)
Friday, 07.12.2012	Technology & Financial Management (502103) (Common to Design & Mechatronics)	Technology & Financial Management (502203)
Tuesday, 11.12.2012	**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
Thursday, 13.12.2012	**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.

Day & Date	Heat Power Engineering	Design Engineering
Monday, 03.12.2012	Advanced Heat Transfer (502108)	Vibration & Noise Control (502208)
Wednesday, 05.12.2012	Measurement Techniques and Data Analysis (502109)	Advanced Machine Design (502209)
Saturday, 08.12.2012	Advanced Fluid Mechanics (502110)	Analysis & Synthesis of Mechanisms (502210)
Wednesday, 12.12.2012	**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
Friday, 14.12.2012	**Elective – IV (502112)** a)Heat Exchanger System Design and Performance b)Computational Fluid Dynamics OPEN (SELF STUDY)** i)Computer Aided Engineering (Design)	**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
Saturday, 01.12.2012	Applied Numerical Methods and Computational Techniques (502801)
Tuesday, 04.12.2012	Mechanical of Electronic Measurements (502802)
Friday, 07.12.2012	Technology and Financial Management (502103) (Common to Mechanical)
Tuesday, 11.12.2012	**Elective - I((502804)** a) Design of Machine Elements b) Digital Signal Processing c) Advanced Material Science
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Microcontrollers (502808)
Wednesday, 05.12.2012	Industrial Automation (502809)
Saturday, 08.12.2012	Drives & Actuators (502810)
Wednesday, 12.12.2012	**Elective – III (502811)** a) Computer Aided Design b) Robotics c) Automotive Electronics
Friday, 14.12.2012	**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.

Saturday, 01.12.2012	Mathematical Modeling & Analysis (502201)
Tuesday, 04.12.2012	Automotive Engine Design (502301)
Friday, 07.12.2012	Technology and Financial Management (502103)
Tuesday, 11.12.2012	**Elective – I (502302)** a) Advanced Heat Transfer b)Finite Element Method c)Advanced Hydraulics and Pneumatic Systems
Thursday, 13.12.2012	**Elective – II (502303)** a)Tribology 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.

Monday, 03.12.2012	Automotive Fuels and Emissions (502306)
Wednesday, 05.12.2012	Autoerotic (502307)
Saturday, 08.12.2012	Fundamentals of Vehicle Dynamics (502308)
Wednesday, 12.12.2012	**Elective – III (502309)** a)Noise Vibrations and Harshness b)Automotive Materials c)Vehicle Aerodynamics
Friday, 14.12.2012	**Elective – IV (502310)** a)Computational Fluid Dynamics b)Automotive Chassis Design c)** Open Elective (Self Study)

ME Mechanical (Energy Engineering)(2012 Course) Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Saturday, 01.12.2012	Advanced Engineering Mathematics (502501)
Monday, 03.12.2012	Advanced Thermodynamics (502502)
Wednesday, 05.12.2012	Energy Conversion Systems (502503)
Friday, 07.12.2012	**Elective – I (502504)** a) Nuclear Materials and Reactor Fundamentals b) Process Optimization c) Plant Operation, Dynamics and Control
Tuesday, 11.12.2012	**Elective – II (502505)** a) Electromechanical and Reactor Systems b) Process Integration c) Non Conventional Energy Sources

ME Mechanical (Computer Aided Design Manufacture & Engineering) (2012 Course) Sem. I
Time : 2.30 p.m. to 5.30 p.m.

Saturday, 01.12.2012	Advanced Machine Design (520401)
Monday, 03.12.2012	Mathematical Modeling (502402)
Wednesday, 05.12.2012	Computer Aided Design (520403)
Friday, 07.12.2012	**Elective – I (502404)** a) Material for Engineering Applications b) Advanced Manufacturing Processes c) Customization of CAD/CAM Software's d) CAD/CAM Practices in Metal Forming
Tuesday, 11.12.2012	**Elective – II (502405)** a) Finite Element Analysis b) Integrated Product Design & Development c) Computational Fluid Dynamics d) Robotics

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
Saturday, 01.12.2012	Advanced Mathematical Technique for Control System (503101)	Computer Applications in power Systems (503201)
Tuesday, 04.12.2012	Process Control Management (503102)	Power Sector Economics, Management & Restructuring (503202)
Friday, 07.12.2012	Nonlinear Control System (503103)	Power System Modeling (503203)
Tuesday, 11.12.2012	**Elective-I (503104)** a) Automation & Robotics b) Modeling & Dynamic System	**Elective-I (503204)** a) Digital Signal Processing & its Applications b) Advanced Power Electronics
Thursday, 13.12.2012	**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.

Day and Date	Control System 2008 Course	Power System 2008 Course
Monday, 03.12.2012	Multivariable & Optimal Control System (503108)	Power System Dynamics (503208)
Wednesday, 05.12.2012	System Identification & Adaptive Control (503109)	Power System Planning & Reliability (503209)
Saturday, 08.12.2012	Advanced Digital Control Technique (503110)	High Voltage Power Transmission (503210)
Wednesday, 12.12.2012	**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
Friday, 14.12.2012	**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.

Saturday, 01.12.2012	Modeling and Analysis of Electrical Machines (503301)
Tuesday, 04.12.2012	Energy Management and Power Quality in Electrical Drives (503302)
Friday, 07.12.2012	Power Electronic Devices and Circuits (503303)

Tuesday, 11.12.2012	**Elective – I (503304)**
	  a) DSP and its Applications in Electrical Drives
	  b) Data Acquisition and Signal Conditioning
	  c) Digital Simulation of Power Electronic Systems

Thursday, 13.12.2012	**Elective – II (503305)**
	  a) FACTS and HVDC
	  b) Harmonics and their Mitigation

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

Monday, 03.12.2012	Controlled Electrical Drives (503308)
Wednesday, 05.12.2012	Power Electronic Applications (503309)
Saturday, 08.12.2012	Design of Power Electronic Systems (503310)
Wednesday, 12.12.2012	**Elective – III (503311)** a)Automation in Industrial Drives b)Computer Aided Design of Electrical Machines c)Microcontroller Applications

Friday, 14.12.2012	**Elective – IV (503312)**
	  a) Artificial Intelligence in Electrical Drives
	  b) Special Topics in Power Electronics and Drives
	  c) Open Elective

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
Saturday, 01.12.2012	Electromagnetics & Antenna Theory (504222)	Analog & Digital CMOS IC Design (504181)
Tuesday, 04.12.2012	Principles & Practices for IT Management (504182) (Common to VSLI, Electronics)	Principles & Practices for IT Management (504182)
Friday, 07.12.2012	RF Wave & Microwave Circuit Design (504223)	Embedded System Design (504183)
Tuesday, 11.12.2012	**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
Thursday, 13.12.2012	**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
Monday, 03.12.2012	Microwave Integrated Circuits (504228)	Real Time Operating Systems (504188)
Wednesday, 05.12.2012	Signal Processing for Wireless Communication (504229)	Embedded Signal Processing (504189)
Saturday, 08.12.2012	Mobile Communication – GSM and CDMA (504230)	RF IC Design (504190)
Wednesday, 12.12.2012	**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
Friday, 14.12.2012	**Elective – IV (Open) (504232)** <u>Open Elective</u> i))Software Project Management ii) Digital Signal Compression	**Elective IV – (Open) (504192)** a) Embedded Automotive Systems b) System – on Chip (SoC) c) Software Defined Radio d) High Performance Computer Network (Comm. to I.T.)

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
Saturday, 01.12.2012	Liner Algebra & Random Processes (504501)
Tuesday, 04.12.2012	Principles & Practices for I.T. Management (504182) (Common to E.& TC, V.L.S.I. & Electronic)
Friday, 07.12.2012	Signal Processing Techniques (504502)
Tuesday, 11.12.2012	**Elective-I (504503)** a) Digital Image Processing b) Automotive Electronics c) Artificial Intelligence
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Statistical Signal Processing (504507)
Wednesday, 05.12.2012	Advanced Digital Signal Processing (504508)
Saturday, 08.12.2012	VLSI in Signal Processing (504509)
Wednesday, 12.12.2012	**Elective – III: (504510)** a)Acoustic & Speech Processing b)Digital Signal Compression c)Multimedia Techniques
Friday, 14.12.2012	**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
Saturday, 01.12.2012	Microelectronics (504195)
Tuesday, 04.12.2012	Principles & Practices for IT Management (504182)
Friday, 07.12.2012	Signal Processing Architectures (504196)
Tuesday, 11.12.2012	**Elective-I (504197)** a) Fault Tolerant System Design b) Advanced Digital System Design c) Wireless & Mobile Technologies
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Embedded Systems (504201)
Wednesday, 05.12.2012	Communication Network and Security (504202)
Saturday, 08.12.2012	Image Processing and Pattern Recognition (504203)
Wednesday, 12.12.2012	**Elective – III (504204)** a) Digital Systems using PLDs b) Biomedical Signals and Systems c) Embedded Video processing
Friday, 14.12.2012	**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.

Saturday, 01.12.2012	Coding & Modulation Techniques (504601)
Tuesday, 04.12.2012	Principles & Practices of IT Management (504182)
Friday, 07.12.2012	Modeling & Simulation of Communication Network (504602)
Tuesday, 11.12.2012	**Elective – I (504603)** a)Microwave and Antenna Theory b)Signal Detection and Estimation c) Ad-hoc Networks
Thursday, 13.12.2012	**Elective – II(504604)** a) RF MRMs b)Network Architecture & Design c)Computational Electromagnetics

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

Monday, 03.12.2012	Wired and Wireless Networks (504607)
Wednesday, 05.12.2012	Network Traffic Analysis and Qos (504608)
Saturday, 08.12.2012	Wireless System Design (504609)
Wednesday, 12.12.2012	**Elective – III ((504610)** a)Wireless Sensor Networks b)Mobile Computing c)Network Security
Friday, 14.12.2012	**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
Saturday, 01.12.2012	Mathematics and Statistics (511101)
Tuesday, 04.12.2012	CAD/CAM/CIM (511102)
Friday, 07.12.2012	Advanced Manufacturing Processes (511103)
Tuesday, 11.12.2012	**Elective-I (511104)** a) Advanced Mechatronics b) Reliability & Failure Analysis c) Supply Chain Management d) Advanced Machine Tool Design
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Material Technology (511108)
Wednesday, 05.12.2012	Manufacturing Management (511109)
Saturday, 08.12.2012	Industrial Automation (511110)
Wednesday, 12.12.2012	**Elective – III (511111)** a) Plastics Processing b) Product Life Cycle Management c) Welding & Joining d) Surface Treatment processes
Friday, 14.12.2012	**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.

Saturday, 01.12.2012	Computer Aided Design (511201)
Tuesday, 04.12.2012	Computer Aided Manufacturing (511202)
Friday, 07.12.2012	Optimization Techniques (511203)
Tuesday, 11.12.2012	Elective I (511204) a)Advanced Stress Analysis b)Tribology & Surface Engineering c)Industrial Robotics & Artificial Intelligence d)Concurrent Product Design
Thursday, 13.12.2012	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.

Monday, 03.12.2012	Computer Integrated Manufacturing (511208)
Wednesday, 05.12.2012	Finite Element Analysis (511209)
Saturday, 08.12.2012	Advanced Mathematics (511210)
Wednesday, 12.12.2012	Elective –III: (511211) a)Product Life Cycle Management b)Advanced Materials and Processing c)Manufacturing System Design d)Quality & Reliability Engineering
Friday, 14.12.2012	Elective – IV :(511212) a)Computer Aided Production 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
Saturday, 01.12.2012	Applied Algorithms (510101) (Common to Network Engineering)	**NETWORK ENGINEERING** Applied Algorithms (510301)
Tuesday, 04.12.2012	Emerging Trends in Computer Architecture (510102) (Common to Network Engineering)	Emerging Trends in Computer Architecture (510302)
Friday, 07.12.2012	Principles & Practices for IT Management (510103) (Common to Network Engineering)	Principles & Practices for IT Management (510303)
Tuesday, 11.12.2012	**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
Thursday, 13.12.2012	**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.

Day and Date	Computer Engineering	Computer Networks
Monday, 03.12.2012	Distributed System (510108)	Operating System Design (510308)
Wednesday, 05.12.2012	High Performance Database System (510109) (Common to Network Engineering)	High Performance Database Systems (510309)
Saturday, 08.12.2012	Network Design, Modeling and Analysis (510110)	Advanced Software Engineering (510310)
Wednesday, 12.12.2012	**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
Friday, 14.12.2012	**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
Saturday, 01.12.2012	Applied Statistics for Chemical Engineers (509101)
Tuesday, 04.12.2012	Management of R & D in Chemical Industries (509102)
Friday, 07.12.2012	Advanced Separation Processes (509103)
Tuesday, 11.12.2012	**Elective-I (509104)** a) Computational Fluid Dynamics b) Process Design & Synthesis c) Advanced Thermodynamics d) Computer Aided Design
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Process Modeling and Simulation (509108)
Wednesday 05.12.2012	Advanced Transport Phenomena (509109)
Saturday, 08.12.2012	Advanced Process Control (509110)
Wednesday, 12.12.2012	**Elective – III (509111)** a) Catalysis and Surface Phenomenon b) Advanced Reaction Engineering c) Mathematical Methods in Chemical Engineering d) Bioprocess Engineering
Friday, 14.12.2012	**Elective – IV OPEN (509112)** a)Catalysis and Surface Phenomenon b)Process Optimization c)Fuel Cells Technology d) Industrial Pollution Control e) Non Technology Theory & Application

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
Saturday, 01.12.2012	Applied Statistics for Environmental Engineers (509131)
Tuesday, 04.12.2012	Environmental Geosciences (509132)
Friday, 07.12.2012	Environmental Chemistry (509133)
Tuesday, 11.12.2012	**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
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Wastewater Treatment & Design (509138)
Wednesday, 05.12.2012	Solid Waste Management (509139)
Saturday, 08.12.2012	Industrial Waste Treatment (509140)
Wednesday, 12.12.2012	**Elective III (509141)** a)Ecology and Risk Assessment b)Water Quality Modeling c)Modern Trends in Environmental Engineering d)Environmental Biotechnology
Friday, 14.12.2012	**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
Saturday, 01.12.2012	Numerical Methods & Simulation in Petroleum Engineering (512101)
Tuesday, 04.12.2012	Petroleum Reservoir Management (512102)
Friday, 07.12.2012	Horizontal Multilateral & Intelligent Wells (512103)
Tuesday, 11.12.2012	**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
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	GIS and Computer Applications in Petroleum Industry (512108)
Wednesday, 05.12.2012	Environmental Management Technology and Safety Measures (512109)
Saturday, 08.12.2012	Advanced Natural Gas Engineering (512110)
Wednesday, 12.12.2012	**Elective – III (512111)** a)Artificial Lift Techniques b)Advanced Stimulation Techniques c)Piping Design and Engineering
Friday, 14.12.2012	**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
Saturday, 01.12.2012	Applied Algorithms (514421)
Tuesday, 04.12.2012	Software Engineering Methodologies (514402)
Friday, 07.12.2012	Advance Operating Systems (514403)
Tuesday, 11.12.2012	**Elective-I (514422)** a) Software Architecture(514404)(A) b) Real Time & Embedded System (514404)(B) c) Bioinformatics (514422)(C)
Thursday, 13.12.2012	**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.

Day and Date	Information Technology
Monday, 03.12.2012	Net centric Computing (514426)
Wednesday, 05.12.2012	Advance Trends in Database Systems (514409)
Saturday, 08.12.2012	Management Trends in Information Technology (514427)
Wednesday, 12.12.2012	**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)
Friday, 14.12.2012	**Elective – IV (514439)** a) Internet Routing Design (514428)(A) b) Advance Network Programming (514412)(B) c) High Performance Computer Networks (514412)(C) Open Elective II (Self Study)** i)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
Saturday, 01.12.2012	Economics (511201)
Tuesday, 04.12.2012	Work Study & Ergonomics (511202)
Friday, 07.12.2012	Optimization Techniques & Simulation Modeling (511203)
Tuesday, 11.12.2012	**Elective-I (511204)** a) Marketing Management b) Human Resource Management c) Entrepreneurship Development d) World Class Manufacturing
Thursday, 13.12.2012	**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.

Monday, 03.12.2012	Reliability Engineering & Research Methodology (511208)
Wednesday, 05.12.2012	Costing & Finance (511209)
Saturday, 08.12.2012	Productivity Management (511210)
Wednesday, 12.12.2012	**Elective – III (511211) (** a)Human Factors Engineering b)Process Planning & Manufacturing Engineering' c)Management of Service Sector d)Industrial & Commercial law
Friday, 14.12.2012	**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
Saturday, 01.12.2012	Transducer Design (5061101)
Tuesday, 04.12.2012	Mathematical Methods in Instrumentation (5061102)
Friday, 07.12.2012	Communication Protocols for Instrumentation (5061103)
Tuesday, 11.12.2012	Analytical Instrumentation (5061104)
Thursday, 13.12.2012	**Elective : I (5061105)** a)Industrial Automation (5061105) b)Building Automation (5061105) c)Geotechnical Instrumentation (5061105) **Biomedical Instrumentation (5061201)** 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.

Day and Date	
Monday, 03.12.2012	Control System Design (5061108)
Wednesday, 05.12.2012	Advanced Signal Processing (5061109)
Saturday, 08.12.2012	Organisational Behaviour & Management (5061110)
Wednesday, 12.12.2012	**Elective : II (5061111)** a)Modern Control Theory ((5061111) b)Mechatronics (5061111) c)Robotics (5061111) d)Advance Process Instrumentation **Biomedical Instrumentation(5061204)** a)Biosignal Processing (5061204) b)Rehabilitation Engineering (5061204)
Friday, 14.12.2012	**Elective : III (5061112)** a)Advanced Process Instrumentation (5061112) b) Automobile Instrumentation (5061112) c)Open Elective **Biomedical Instrumentation*(5061205)** 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
Saturday, 01.12.2012	Mathematical and Statistical Methods (509115)
Tuesday, 04.12.2012	Principles of Management (509116)
Friday, 07.12.2012	Polymer Processing and Testing (509117)
Tuesday, 11.12.2012	**Elective I : (509118)** a) Polymer Reaction Engineering b) Transport Phenomena in Polymers c) Synthesis and Chemistry of Polymers
Thursday, 13.12.2012	**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
Monday, 03.12.2012	Polymer Physics and Characterization (509122)
Wednesday, 05.12.2012	Polymer Structure and Properties (509123)
Saturday, 08.12.2012	Processing and Mechanics of Composites (509124)
Wednesday, 12.12.2012	**Elective – III: (509125)** a) Science and Engineering of Fibers b) Polymer Product Design **c)** Specialty Polymer Materials
Friday, 14.12.2012	**Elective - IV : (509126) (Open)** a) Paints and Adhesives Elective IV b) Elastomer Technology c) Open

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

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Day and Date	Printing 2008 Course Sem. I
Saturday, 01.12.2012	Probability, Statistics & Queueing Theory (508101)
Tuesday, 04.12.2012	Printing Technology Management (508102)
Friday, 07.12.2012	Modern Trends in Printing (508103)
Tuesday, 11.12.2012	**Elective-I (508104)** a) Workflow Management in Printing Industry b) Printing & Packaging Materials c) Design of Experiments & Research Methodology
Thursday, 13.12.2012	**Elective-II (508105)** a) Digital Printing b) Entrepreneurship in Printing & Allied Fields c) Quality Control Systems & Productivity

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

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Day and Date	Printing 2008 Course Sem. II
Monday, 03.12.2012	Print Media Communications (508108)
Wednesday, 05.12.2012	Web Handling on Press (508109)
Saturday, 08.12.2012	Substrate and Ink (508110)
Wednesday, 12.12.2012	**Elective – III : (508111)** a) Multimedia Systems and Communication b)Total Productive Maintenance in Printing c) Press Finger Printing
Friday, 14.12.2012	**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/1245
Date : 09/11/2012

                                                         Dr. Sampada Joshi
                                                         Controller of Examinations