UNIVERSITY OF PUNE

Examination Circular No. 49 of 2013
Programme of B.E. 2003 & 2008 course (All Branches) Examinations, May, 2013

1. Candidates are required to be present at their places of examination, fifteen minutes before the time of the first paper and ten minutes before the time of each subsequent papers.

2. Candidates are forbidden from taking any material into the examination hall that can be used for malpractice at the time of examination.

3. No request for any special concession such as a change in time or any day fixed for the University Examination on religious or any other ground shall be granted.

4. Candidates are requested to see the Notice -Board at their place of examination regularly for changes if any, that may be notified later in the programme.

5. Candidates are requested to note the Day, Date and Time of every Paper on every Day

6. Candidates are permitted to use stencils at the time of examination.

7. Candidates appearing for the examinations are expected to provide themselves with
 Side- rules.

8.   The exchange or loan of side-rules, drawing instruments of other materials used in the examination hall is Not Permitted while the examinations are in process. Candidates must bring their own instruments and will not be allowed to borrow from each other under any circumstances.

9. Use of non-programmable battery operated electronic Calculator of Pocket-size is allowed. The exchange of Calculators is not allowed.

10. The Centers and Places of the examination will be as follows :

1. **PUNE :**

Sr. No.	College Code	Centers and Places of the Examinations
1	2	Maharashtra Institute of Technology, Pune 411 038.
2	5	Pune Institute of Computer Technology, Pune 411043.
3	6	Cusrow Wadia Institute of Technology, Pune 411001.
4	7	P.V.G.'s C.O.E.T., Pune 411009.
5	8	Pad. Dr. D.Y. Patil College of Engineering, Nigdi, Pune 411044.
6	19	College of Engineering, Malegaon (Bk.), Tal. Baramati, Dist – Pune 413115.
7	20	H.S.S.S.'s Cummins College of Engineering for Women, Pune 411052.
8	21	A.I.S.S.M.S.'s Institute of Technology, Pune 411001.(Repeater Students of P.I.E.T. College of Engineering, Shivajinagar, Pune -05. also.)

9	22	Army Institute of Technology, Dighi Hills, Pune 411015.
10	23	Sinhgad College of Engineering, Vadgaon Bk., Pune 411041.
11	24	Pad. Dr. D.Y. Patil Institute of Engineering & Tech., Pimpri, Pune 411018
12	25	A.I.S.S.M.S.'s Institute of Information Tech., Kennedy Road, Pune 411001.
13	26	P.D.E.S.'s A.G. Awate College of Engineering, Hadapsar, Pune 411028.
14	28	MAEER'S Maharashtra Academy of Engineering, Kedgaon Alandi, Dist. Pune.
15	30	G.S. Moze College of Engineering, Balewadi, Pune.
16	31	P.E.S.'s Modern College of Engineering, Pune 411005.
17	32	M.E.S.'s College of Engineering, Pune 411001.
18	33	Pimpri-Chinchwad Education Trust's College of Engg., Nigdi, Pune 411044.
19	34	Bharati Vidyapeeth's College of Engineering for Women, Pune 411043(Repeater Students of Bharati Vidyapeeth's COE, Dhankawadi. Pune 411043 also.)
20	35	VP's College of Engineering, Vidyanagari, Bhingwan Road, Tal. Baramati. Dist: Pune
21	36	Smt. Kashibai Navale College of Engineering for Women, Vadgaon Bk., Pune 411041
22	37	Rajarshi Shahu College of Engineering, Tathwade, Pune 411 013.
23	38	MAEER's Maharashtra Institute of Technology, College of Engineering. Pune - 411038.
24	39	V.I.I.T. College of Engineering, Sr. No. 2/3/4, Kondhwa (Bk.), Pune 411 048. (Repeater Students of V.I.T College of Engg, Pune 411037 also)
25	40	J.S.P.M.'s Jayawantrao Sawant College of Engineering, Handewadi Road, Hadapsar, Pune 411028.
26	42	Sinhgad Tech. Edu. Soc.'s Sinhgad Inst. of Tech., Kusgaon (BK), Lonawala, Tal. Mawal
27	43	Sinhgad Academy of Engineering, Kondhwa (BK), Pune 411 048.
28	44	Siddhant College of Engineering, Chakan - Talegoan Road, Sudumbare, Dist: Pune - 412 109.
29	45	Marathwada Mitra Mandal College of Engineering , Pune – 411 052.
30	46	G.H. Raisoni College of Engineering, Wagholi, Pune 412 207.
31	48	S.S.M.S. Padmabhushan Vasantdada Patil Inst. Of Tech, Bawadhan (Kd), Pune – 411038.
32	49	P.G..M.T's Parvatibai Genba Moze College of Engineering, Wagholi, Pune

33	51	J.S.P.M's Imperial College of Engineering & Research, Pune Nagar Rd, Wagholi, Pune-412012.
34	52	S.C.E.S's Indira College of Engineering & Magt. Paranwadi Tal. Maval, Pune.
35	53	Z.E.S's Dnyanganga college of Engineering & Research, S.N. 39, Narhe, Tal. Haveli Dist – Pune 411 041.
36	54	G.H. Raisoni Institute of Engineering & Technology, Gat No. 120 Pune-Nagar Road., Wagholi, Pune –-412207
37	55	Nutan Maharashtra Institute of Engg & Tech., Vishnupuri,Talegaon Station, Tal: Maval, Dist: Pune - 410507
38	57	STE'S SIT * Science, Nehre Ambegaon, Pune 411041.
39	59	MMM'S Institute of Tech., Sr. No.35 Plot No. 516 Lohagaon, Tal: Haveli, Dist: Pune -411032
40	60	DPE'S Dhole Patil COE, 1248 Umbalenagar, Wagholi, Tal: Haveli,Dist:Pune
41	63	Al-Amin Educational & Medical Foundation's College of Engineering, Bhima Koregaon, Tal: Shirur, Dist: Pune – 412 216
42	65	K.J.S. Edu. Society, Trinity COE, & Research, Sr.No.25/27, Undri-Pisoli, Bopdeo Ghat Tal: Haveli, Dist: Pune
43	67	Dr.D.Y.Patil College of Engineering, S.No. 124/126, A/P. Ambi, Talegaon MIDC Road, Tal. Maval, Dist. Pune
44	70	Alard College of Engineering, A/P. Marunje, Tal. Mulshi, Dist. Pune
45	71	Rajgad Dnyanpeeth Shri Chhatrapati Shivajiraje College of Engineering, Dhangwadi, Tal. Bhor, Dist. Pune
46	72	K.J. College of Engineering & Management Research, S.No. 25/27, Yeolewadi, Pisoli, Near Bopdeoghat, Tal. Haveli, Dist. Pune
47	73	J.S.P.M. Bhivarabai Sawant Institute of Technology & Research, S.No.720, Wagholi, Tal. Haveli, Dist. Pune
48	75	S.B.Patil College of Engineering, Gat. No. 58, Vangali, Tal. Indapur, Dist. Pune
49	78	Government College of Engineering, Awasari Khurd, Tal. Ambegaon, Dist. Pune 412405
50		Sharadchandra Pawar College of Engineering, Dumbarwadi, Tal. Junnar, Dist.Pune

2) AHMEDNAGAR:

51	9	Padmashri Dr. V. Vikhe Patil College of Engineering, Ahmednagar.
52	10	Amrutvahini College of Engineering, Sangamner, Dist. Ahmednagar
53	11	Pravra Rural College of Engineering, Pravaranagar (Loni), Dist. Ahmednagar.
54	12	College of Engineering, Kopargaon, Dist. Ahmednagar.
55	64	Vishwabharti Academy's COE Jamkhed Road, at Sarola Baddi, Dist:A'nagar
56	66	SGR Edu. Foundation COE & Management ,Gat. No. 1030, at Chas A'nagar
57	77	HS Babanrao Pachpute VT's College of Engineering, A/P. Kashti, tal. Shrigonda, Dist. Ahmednagar
58	79	Shri Chhatrapati Shivaji College of Engineering, Shrishivajinagar, Tal. Rahuri, Dist. Ahmednagar

3) NASHIK:

59	13	K.K. Wagh College of Engineering, Nashik,
60	27	P.R.E.S's., Sir .Vishveshwarayya Memorial College of Enggi., Chincholi, Tal. Sinner, Dist. Nashik.
61	29	N.D.M.V.P. Samaj's Karmaveer Adv. Baburao Ganpatrao Thakare, College of Engineering, Gangapur, Nashik.
62	41	S.N.J.B.'s Late Sou. Kantabai Bhavarlal Jain College of Engineering, Neminagar, Chandwad, Nashik 423 101.
63	47	M.E.T. College of Engineering, Adgaon, Nashik.
64	50	S.N.D. College of Engineering, Nagar –Manmad Road, Babhulgaon, Yeola, Dist. Nashik.
65	58	Matoshree College of Engineering and Research, Eklahare, Nashik- 423 401
66	61	Sabdeep Institute of Tech. & Research Centre, Mahirwani, Dist: Nashik
67	62	Nashik Gramin S.P.M's Vally, COE & Research, at Anjaneri, Tal: Trambakeshwar, Nashik.
68	69	Gokhale Education Society's R.H.Sapat College of Engineering & Management Studies & Research, Prin.T.A.Kulkarni Vidyanagar, Nashik 422005
69	74	AVEWT's Shatabdi Institute of Engineering Research A/P. Agaskhind, Tal.Sinnar, Dist, Nashik
70	76	Late G.N.Sapkal College Engineering, Sapkal Knowledge Hub, Anjaneri, Trimbakeshwar Road, Nashik 422213

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

B.E. (CIVIL)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Hydrology & Irrigation(401001)	Environmental Engineering – II (401001)
Monday 06/05/2013	Environmental Engg. II(401002)	Dams and Hydraulic Structures (401002)
Wednesday 08/05/2013	Quantity Surveying Contracts & Tenders (401003) ***(2. 30 p.m. to 6. 30 p.m.)**	Structure Design – III (401003) ***(2:30 p.m. to 6:30 p.m.)**
Friday 10/05/2013	Structural Design III (401004) ***(2. 30 p.m. to 6. 30 p.m.)**	**Elective – I (401004)** a) Structural Design in Bridges b) System Approach in Civil Engineering c) Air Pollution and Control d) Architecture and Town Planning e) Advanced Geotechnical Engineering
Tuesday 14/05/2013	**Elective – I (401005)** a) Systems Approach in Civil Engg. b) Architecture and Town Planning c) Advanced Geotechnical Engg. d) Finite Element Method e) Structural Design of Bridges f) Advanced Environ-mental Management h) Geoinformatics	**Elective – II (401005)** a) Matrix Methods of Structural Analysis b) Hydroinformatics c) TQM & MIS in Civil Engineering d) Earthquake Engineering e) Advanced concrete Technology

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Dams & Hydraulic Structures (401008)	Quantity Surveying Contracts and Tenders (401009)
Tuesday 21/05/2013	Transportation Engineering – II (401009)	Transportation Engineering – II (401010)
Thursday 23/05/2013	Foundation Engineering (401010)	**Elective – III (401007)** a) Advanced Structural Design b) Advanced Foundation Engineering c) Advanced Engineering Geology with Rock Mechanics d) Advanced Environmental Management e) Construction Management
Monday 27/05/2013	**Elective – II (401007)** a) Advanced Concrete Tech b) Earthquake Engineering c) Adv. transportation Engineering ***(2. 30 p.m. to 6. 30 p.m.)** d) Adv. Structured Design e) Construction Management f) Integrated Water Resources Planning & Management g) Adv. Engineering Geology with rock Mechanics	**Elective – IV (401008)** a) Integrated Water Resources an d Planning b) Advaced Transportation Engineering c) Statistical Analysis And Computational Methods in Civil Engg. **Open Elective (401008)** a) Finite Element Method in Civil Engg. b) Geoinformatics c) Hydropower Engineering d) Industrial Waste Water Management e) Mechanics of Waves

B.E. (MECHANICAL)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Mechanical System Design (402041) *(2.30 p.m. to 6.30 p.m.)	CAD/CAM Automation (402041)
Monday 06/05/2013	Dynamics of Machinery (402042)	Dynamics of Machinery (402042)
Wednesday 08/05/2013	Mechatronics (402043)	Industrial Fluid Power (402043)
Friday 10/05/2013	Gas Turbines and Jet Propulsion (402044)	**Elective – I (402044)** a) Energy Audit and Management b) Product Design and Development c) Design of Pumps, Blowers and Compressors d) Tribology
Tuesday 14/05/2013	**Elective – I (402045)** a) Product Design & Development b) Material Engg. And their Processing c) Alternative Energy Sources d) Kinematic Analysis and Synthesis e) Operation Research f) Costing & Cost Control	**Elective – II (402045)** a) Automobile Engineering b) Machine Tool Design c) Quantitative and decision making Techniques

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	CAD/CAM & Automation (402047)	Power Plant Engineering (402047)
Tuesday 21/05/2013	Power Plant Engineering (402048)	Mechanical System Design (402048) ***(2.30 p.m. to 6.30 p.m.)**
Thursday 23/05/2013	Industrial Fluid Power (402049)	**Elective – III (402049)** a) Computational Fluid Dynamics b) Finite Element Method c) Robotics d) Advanced Air Conditioning and Refrigeration
Monday 27/05/2013	**Elective - II (402050)** a) Robotics b) Comp. Fluid Dynamics c) Energy Management d) Rapid Prototyping e) Reliability Engg. f) Automobile Engg.	**Elective – IV (402050)** a) Industrial Heat Transfer Equipments b) Management Information System c) Reliability Engineering **d) Open Elective** i) Cryogenic Engineering ii) Product Lifecycle Management iii) Industrial Automation

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B.E. (MECHANICAL SANDWICH)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

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Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Design Engineering (402061) *(2.30 p.m. to 6.30 p.m.)	Machine & Computer Aided Design (402061) *(2.30 p.m. to 6.30 p.m.)
Monday 06/05/2013	Dynamics of Machinery (402042)	Dynamics of Machinery (402042) (Common to Mechanical)
Wednesday 08/05/2013	----------	Industrial Hydraulics & Pneumatics (402062)
Friday 10/05/2013	Industrial Hydraulics & Pneumatics (402062)	**Elective – II (402063)** a) Refrigeration & Air Conditioning b) Computational Fluid Dynamics c) Finite Element Method
Tuesday 14/05/2013	**Elective – I (402063)** a) Refrigeration & Air Conditioning b) Robotics c) Tribology d) Automobile e) Computer Fluid Dynamics	**Elective – III(402064)** a) Automobile Engineering b) Operations Research c) Robotics

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SEMESTER – II

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Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	CAD/CAM & Automation (402048)	----------
Tuesday 21/05/2013	----------	----------
Thursday 23/05/2013	----------	----------
Monday 27/05/2013	**Elective – III (402065)** a) Industrial Engg. b) Costing & Cost Control c) Production Management d) Machine Tools Design e) Non-conventional Energy	**Elective – IV (402066)** a) Costing & Cost Control b) Machine Tool Design c) Energy Management & Industrial Pollution

B.E. (ELECTRICAL)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Power System Operation & Control (403141)	PLC and SCADA Applications (403141)
Monday 06/05/2013	Utilization of Electrical Energy (403142)	Power System Operation and Control (403142)
Wednesday 08/05/2013	Industrial Drives & Control(403144)	Control System – II (403145)
Friday 10/05/2013	Control System II (403145)	**Elective – I (403143)** a) Robotics and Automation b) Power Quality c) Illumination Engineering d) Project Management
Tuesday 14/05/2013	**Elective I (403143)** a) Robotics & Automation b) Power Quality c) Illumination Engineering d) Project Management e) Restructuring & Deregulation	**Elective – II (403144)** a) Restructuring and Deregulation b) Embedded System c) EHV Transmission d) Smart Grid

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Energy Management (403147)	Switchgear and Protection (403147)
Tuesday 21/05/2013	Switchgear & Protection (403148)	Industrial Drives and Control (403148)
Thursday 23/05/2013	Digital Control System (403149)	**Elective – III (403149)** a) VLSI Design b) High Voltage Engineering c) Digital Signal Processing d) ANN and its Applications in Electrical Engineering
Monday 27/05/2013	**Elective II (403150)** a) VLSI Design b) High Voltage Engineering c) Digital Signal Processing d) ANN & Application in Electrical Engineering	**Elective – IV (403150)** a) Modeling of Electrical System b) Renewable Energy System c) Digital Control System

SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Computer Network (404214)	Electronics Product Design (404181)
Monday 06/05/2013	Voice Network (404215)	VLSI Design & Technology (404182)
Wednesday 08/05/2013	Electronics Product Design (404216)	Computer Network (404183)
Friday 10/05/2013	VLSI Design (404217)	**Elective – I (404184)** a) Digital Image Processing b) Embedded System and RTOS c) Industrial Drives Control d) Microwave Communication and Radar
Tuesday 14/05/2013	**Elective I (404218)** a) Embedded System Design b) Advanced Power Electronics c) Artificial Neural Networks d) Robotics and Industrial Automation e) Adv. Digital Signal Processing	**Elective – II -(404185)** a) Entrepreneurship Development b) Joint Time Frequency Analysis c) Micro-electromechanical and system on chip(MEMS and SOC) d) Mobile Communication

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Electronics Measurement System (404222)	Telecommunication & Switching System (404187)
Tuesday 21/05/2013	Telecom. Networks & Management (404223)	Optical Fiber Communication (404188)
Thursday 23/05/2013	Optical & Microwave Communication (404224)	**Elective – III (404189)** a) Soft Computing b) Speech Processing c) Television and Video Engineering d) Test and Measurement Systems
Monday 27/05/2013	**Elective - II (404225)** a) Adv. Communication System b) Digital Image Processing c) Biomedical Engineering d) System Programming & Operating System e) Audio-Video Engineering	**Elective – IV (404190)** a) Artificial Intelligence b) Automotive Electronics c) Nanotechnology d) PLC and Industrial Process Automation **Open Elective:** a) Advanced Satellite System & Application b) Advanced Trends in Telecommunication c) Programable System of Chip

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Computer Network (404201)	Electronics System Design (404201)
Monday 06/05/2013	Electronic Product Design (404202)	VLSI Design (404202)
Wednesday 08/05/2013	Advanced Power Electronics (404203)	Embedded System (404203
Friday 10/05/2013	VLSI Design (404204)	**Elective – I (404204)** a) Advanced Measurement Systems b) Advanced Power Electronics c) Biomedical Instrumentation d) Mechatronics
Tuesday 14/05/2013	**Elective I (404205)** a) Embedded System Design b) Process Instrumentation c) Adv. D.S.P. d) Advanced Communication Engg. e) Software Engineering	**Elective – II (404205)** a) Advanced Computer Architecture b) Entrepreneurship and Business Planning c) SOC (System on Chip) d) Robotics and Automation

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Electronics Measurement System (404209)	Computer Network & Security (404207)
Tuesday 21/05/2013	Management Information System (404210)	Process Automation (404208)
Thursday 23/05/2013	Biomedical Electronics (404211)	**Elective – III (404209)** a) Audio and Video Engineering b) Image Processing and Machine Vision c) Optical and Microwave Communication d) Soft Computing Tools
Monday 27/05/2013	**Elective – II (404212)** a) Real Time Operating Sys b) Artificial Intelligence c) Robotics & Industrial Automation d) System Programming & Operation System e) Digital Image Processing	**Elective – IV (404210)** a) Advanced Communication System b) Automotive Electronic Systems c) Artificial Intelligence d) Nanotechnology in Electronics e) Open Elective:

B.E. (PRODUCTION ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Production Management(411081)	Machine Tool Design (411081)
Monday 06/05/2013	Machine Tool Design (411082)	Manufacturing Automation (411082)
Wednesday 08/05/2013	Manufacturing Automation and Control (411083)	Operations Research (411083)
Friday 10/05/2013	Operation Research (411084)	**Elective – I (411084)** a) Plastic Engineering b) Industrial Robotics c) Powder Metallurgy d) Microprocessor Applications
Tuesday 14/05/2013	**Elective I (411185)** a) Reliability Engineering b) Powder Metallurgy c) Plant Engg. and Maintenance d) Material Handling Technology & Equipment Design	**Elective – II (411085)** a) Ergonomics and Human Factors in Engineering b) Material & Logistic Management c) Simulatiion and Modelling d) Plant Engineering and Maintenance

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Material & Financial Management (411087)	Computer Integrated Design and Manufacturing (411087)
Tuesday 21/05/2013	Process Planning & Tools Selection (411088)	Processing Planning and Tool Selection (411088)
Thursday 23/05/2013	CAD/CAM/CIM (411089)	**Elective – III(411089)** a) Automobile Engineering b) Mechatronics c) Metal Working Tribology d) Finite Element Analysis
Monday 27/05/2013	**Elective II (411090)** a) Robotics b) Ergonomics and Human Factors in Engineering c) Adv. Material Processing d) Adv. Production Tech.	**Elective – IV (411090)** a) World Class Manufacturing b) Intelligent Manufacturing Systems c) Total Quality Management d)Open Elective

SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Mechatronics & Robotics (411121)	Operations Research & Management (411121)
Monday 06/05/2013	Machine Tool Design (411082)	Mechatronics & Robotics (411122)
Wednesday 08/05/2013	Manufacturing Automation and Control (411083)	Advanced Production Technology (411123)
Friday 10/05/2013	Operation Research & Management (411126)	**Elective – I (411124)** a) Machine Tool Design b) Automobile Engineering c) Computer Integrated Manufacturing and Industrial Robotics d). Plastic Engineering
Tuesday 14/05/2013	**Elective – I (411122)** a) Ergonomics b) Financial Mgt. c) Die & Mould Design d) Adv. Product Technique e) Reliability Engineering	**Elective – II (411125)** a) Ergonomice and Human Factors in Engineering b) Materials Management & Logistics c) Financial Management & Cost Control d) Product Development

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	----------	----------
Tuesday 21/05/2013	----------	----------
Thursday 23/05/2013	----------	**Elective – III (411130)** a) Supply Chain Management b) Plant Engineering & Maintenance c) Industrial Relations & Human Resource Management d) Marketing Management
Monday 27/05/2013	**Elective II (411125)** a) Plant Engg. & Facility Layout b) Supply Chain Mgnt. c) Industrial & Commercial Law d) Project Management	

B.E. (INDUSTRIAL ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Quantitative Techniques (411101)	Financial Management & Costing (411101)
Monday 06/05/2013	Business Accounting & Costing (411102)	Project Management (411102)
Wednesday 08/05/2013	Human Factors Engineering (411103)	Quantitative Techniques (411103)
Friday 10/05/2013	Logistics Warehousing (411104)	**Elective – I (411104)** a) Advanced Ergonomics b) Logistics & Warehousing Management c) Material Forming d) Human Resource Management
Tuesday 14/05/2013	**Elective I (411105)** a) Supply Chain Mgnt. b) Simulation Modeling & Analysis c) Units Operation d) Project Management	**Elective – II (411105)** a) Industrial Laws b) World class Manufacturing c) Machine Tool Technology d) Development of Professional Skills

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Flexible Manufacturing System (411108)	Reliability Engineering (411108)
Tuesday 21/05/2013	Advanced Manufacturing Processes (411109)	Energy Management ((411109)
Thursday 23/05/2013	Energy Management(411110)	**Elective – III (411110)** a) IE applications in Service Sector b) Supply Chain Management c) Manufacturing Automation d) Process Planning & Manufacturing Engineering
Monday 27/05/2013	**Elective - II (411111)** a) Entrepreneurship Development b) Plastic Engineering c) Industrial & Commercial Laws d) Material Logistic	**Elective - IV (411111)** a) *** Open Elective b) Plastics Engineering c) Manufacturing Strategies d) Quality Management

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B.E. (PRINTING ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

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Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Costing & Estimating & Project Management, Operation Research (408282)	Technology of Gravure (408283)
Monday 06/05/2013	Surface Preparation-II (408283)	Digital Imaging and Printing (408284)
Wednesday 08/05/2013	Offset Machine-II (408284)	Advertising and Multimedia (408285)
Friday 10/05/2013	Electronic Image Setting (408285)	**Elective - I (408281)** a) Quality Control Techniques in Printing b) Commercial Graphic Design c) Screen Printing Techniques
Tuesday 14/05/2013	**Elective I (408281)** a) Newspaper Technology b) Flexible Packaging c) Security Printing	**Elective – II (408282)** a) Security Printing b) Newspaper Technology c) Open Elective (Self Study)

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SEMESTER – II

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Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Technology of Grevere & Flexo Graphy. (408288)	Package Design and Technology (408289)
Tuesday 21/05/2013	Assembly & Maintenance of Printing Machine (408289)	Print Production Planning and Control (408290)
Thursday 23/05/2013	Substrates & Ink Technology (408290)	**Elective – III (408287)** a) Electronic Publishing b) Printing Machine Maintenance c) Image Conversion & Modification
Monday 27/05/2013	**Elective - II (408287)** a) Study of Materials & Package Design b) Image Conversion & Modification c) Study of Advt. & Multimedia d) Information Technology	**Elective – IV (408288)** a) Flexible Packaging b) Entrepreneurship in Printing c) Open Elective

B.E. (INFORMATION TECHNOLOGY)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Information System Security (414441)	Information Assurance and Security (414441)
Monday 06/05/2013	Advanced Database Management (414442)	Object Oriented Modeling & Design (410 443)
Wednesday 08/05/2013	Object Oriented Modeling & Design (414443)	Software Testing and Quality Assurance (414442)
Friday 10/05/2013	Software Testing & Quality Assurance (414444)	**Elective – I (414443)** a) Advanced Database Management b) Artificial Intelligence c) Computer Design d) Advanced Operating Systems
Tuesday 14/05/2013	**Elective-I (414445)** a) Bio-informatics b) Mobile Computing c) GIS & Remote Sensing d) Org. Behavior & Management	**Elective – II (414444)** a) Embedded System b) Mobile Computing c) Multimedia Systems

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	System Operation and Maintenance (414448)	Distributed System (414448)
Tuesday 21/05/2013	Distributed System (414449)	Information Retrieval (414449)
Thursday 23/05/2013	Information Retrieval (414450)	**Elective – III (414450)** a) Real Time System b) Software Architecture c) Advanced Graphics d) Advanced Computer Networks
Monday 27/05/2013	**Elective II (414451)** a) Artificial Intelligence b) Software Architecture c) Real Time System d) Embedded System	**Elective - IV (414451)** a) Bio Informatics b) Neural Network and Expert System c) Geo Informatics Systems d) Open Elective i) Business Intelligence

B.E. (COMPUTER ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Design & Analysis of Algorithms (410441)	Design & Analysis of Algorithms (410441)
Monday 06/05/2013	Operating Systems (410242)	Principles of Compiler Design (410442)
Wednesday 08/05/2013	Object Oriented Modeling & Design (410443)	Object Oriented Modeling & Design (410 443)
Friday 10/05/2013	Principles of Compiler Design (410444)	**Elective – I (410444)** a) Image Processing b) Design & Analysis of Computer Networks c) Artificial Intelligence d) Software Architecture
Tuesday 14/05/2013	**Elective- I (410445)** a) Image Processing b) Advanced Databases c) Artificial Intelligence d) Multimedia System	**Elective – II (410445)** a) Multimedia Systems b) Mobile Computing c) Embedded Systems d) Software Testing & Quality Assurance

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Networks & Information Security (410448)	Distributed Operating Systems (410448)
Tuesday 21/05/2013	Advanced Computer Architecture & Computing (410449)	Advanced Computer Architecture (410449)
Thursday 23/05/2013	Software Testing & Quality Assurance (410450)	**Elective- III (410450)** a) Pattern Recognition b) High Performance Networks c) Neural Networks d) Advanced Databases
Monday 27/05/2013	**Elective - II (410451)** a) Distributed System b) Software Architecture c) Embedded System d) High Performance Networks	**Elective – IV (410451)** a) VLSI & Digital Systems Design b) Operations Research c) Cloud Computing d) Information Security e) Open Elective

B.E. (PETROCHEMICAL ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Refining Operation (412401)	Reaction Engineering – II (412401)
Monday 06/05/2013	Petrochemical Processes (412402)	Process Dynamics and Control (412402)
Wednesday 08/05/2013	Reaction Engineering II (412403)	Environmental Engineering (412403)
Friday 10/05/2013	Process Dynamics & Control (412404)	**Elective – I (412404)** a) Biochemical Engineering b) Novel Separation Processes c) Elements of Fluidization Engineering d) Green Chemistry
Tuesday 14/05/2013	**Elective I (412405)** a) Environmental Engg. b) Novel Separation Process c) Interface and Colloid Science	**Elective – II (412405)** a) Optimization Techniques for Process Industries b) Emerging feed stocks and Technologies for Petrochemicals c) Natural Gas Technology d) Health, Safety and Environment in Process Industry

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Refinery Process Design (412407)	Refinery Process Design (412408)
Tuesday 21/05/2013	Natural Gas Technology (412408)	Plant Design and Process Economics (412409)
Thursday 23/05/2013	Process Economics & Project Engineering (412409)	**Elective – III(412410)** a) Process Modeling and Simulation b) Fine Chemical Industries c) Colloidal and Interface Science d) Renewable Energy Sources
Monday 27/05/2013	**Elective II (412411)** a) Catalysis Technology And Fluidization Engineering b) Biochemical Engineering C) Petroleum Exploration and Production Operation	**Elective – IV (412411)** a) Petroleum Exploration and Production Operations b) Catalyst Science and Technology c) Polymer Reaction Engineering d) Open Elective

SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Reservoir Engineering I (412381)	Reservoir Engineering II (412381)
Monday 06/05/2013	Petroleum Exploration (412382)	Petroleum Formation Evaluation (412382)
Wednesday 08/05/2013	Formation Evaluation (412383)	Well Engineering and Design (412383)
Friday 10/05/2013	Natural Gas Engineering (412384)	**Elective – I (412384)** a) Petroleum Exploration b) Advanced Instrumentation and Process Control in Petroleum Industry c) Programming Database Management and Information Systems in Petroleum Industry d) Mathematical Methods and Modeling in Petroleum Exploration and Production
Tuesday 14/05/2013	**Elective I (412385)** a) Refining and Petrochemical Technology b) Applied Computational Techniques c) Environment Safety & Health in Petroleum Industries	**Elective-II (412385)** a) Petroleum Refining Technology b) Petroleum Product Analysis c) Non Conventional Hydrocarbon Resources d) Carbon Management in Petroleum Industry

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Reservoir Engineering II (412388)	Improved Oil Recovery and Reservoir Simulation(412387)
Tuesday 21/05/2013	Petroleum Production Engineering II (412389)	Petroleum Production Engineering – II (412388)
Thursday 23/05/2013	Oil Well Drilling Engineering (412390)	**Elective – III (412389)** a) Advanced Drilling Engineering b) Deepwater Technology c) Transport of Oil and Gas d) Environment Technology and Safety in Petroleum Industry
Monday 27/05/2013	**Elective - II (412391)** a) Petroleum Economics b) Integrated Reservoir Management c) Deepwater Technology	**Elective – IV (412390)** a) Petroleum Economics b) Petroleum Production Enhancement and Optimization c) Well Control Methods d) Open Elective

B.E. (CHEMICAL ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Process Dynamics and Control (409342)	Process Dynamics and Control (409343)
Monday 06/05/2013	Chemical Reaction Engg. II (409343)	Chemical Reaction Engineering – II (409344)
Wednesday 08/05/2013	Chemical Process Synthesis (409344)	Chemical Engineering Design – II (409345)
Friday 10/05/2013	Process Equipment Design II (409345)	**Elective – I (409341)** a) Environmental Engineering b) Membrane Technology c) Bioprocess Engineering d) Corrosion Engineering
Tuesday 14/05/2013	**Elective I (409341)** a) Environmental Engg. b) Bioprocess Engg. c) Energy Conservation d) Polymer Technology e) Catalysts g) Adv. Separation Processes h) Petroleum Refining	**Elective – II (409342)** a) Chemical Process Synthesis b) Advanced Materials c) Polymer Technology d) Piping Design & Engineering e) Advanced Separation Processes f) Petroleum Refining

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Process Modeling & Simulation (409349)	Process Modeling and Simulation (409351)
Tuesday 21/05/2013	Project Costing & Appraisal (409350)	Process Engineering Costing & Plant Design (409352)
Thursday 23/05/2013	Chemical Plant Engineering (409351)	**Elective – III (409349)** a) Artificial Intelligence In Chemical Engineering b) Energy Conservation In Chemical Process Industries c) Chemical Process Safety d) Food Technology
Monday 27/05/2013	**Elective - II (409348)** a) Computer Aided process Control b) Food Technology c) Advanced Materials d) Industrial Hazards & Safety e) Piping Design & Engineering f) Fuel Cell Technology g) Petrochemical Engineering	**Elective – IV (409350)** a) Standardization and Quality Assurance in Chemical Process Industry b) Catalysis c) Nanotechnology d) Fuel Cell Technology e) Petrochemical Engineering f) Computer Aided Process Control g) Open Elective

B.E. (POLYMER ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Polymer Structure & Property Relationship (409361)	Polymer Compounding (409361)
Monday 06/05/2013	Polymer Processing Operations I (409362)	Mold & Die Design – I (409362)
Wednesday 08/05/2013	Polymer Composites & Blends (404363)	Polymer Processing Operation – II (409363)
Friday 10/05/2013	Mould & Die Design (409364) ***(2.30 p.m. to 6.30 p.m.)**	**Elective – I (409364)** a) Fiber Technology b) Mechanics of Composites c) Polymer Reaction Engineering
Tuesday 14/05/2013	**Elective - I (409366)** a) Polymer Reaction Engg. b) Rubber Technology c) Surface Coating and Adhesive d) Advanced Polymer Rheology	**Elective – II (409365)** a) Production Planning and Control b) Surface Coating and Adhensives c) Packaging Technology

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Product Design & Computer Application (404368)	Product Design & Polymer Testing (409368)
Tuesday 21/05/2013	Polymer Processing Operations II (409369)	Mold & Die Design – II (409369)
Thursday 23/05/2013	Industrial Management & Process Economics (409370)	**Elective – III (409370)** a) Polymer Physics and Characterization b) Processing of Composites c) Specialty Polymers & Applications
Monday 27/05/2013	**Elective - II (409367)** a) Specialty Polymer b) Fiber Technology c) Mechanics of Composites d) Packing Technology	**Elective – IV (409371)** a) Advanced Polymer Rhenology b) Rubber Technology c) Polymer Thermodynamics and Bends d) Open Elective

B.E. (INSTRUMENTATION & CONTROL ENGINEERING)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Process Instrumentation – I (406261)	Process Instrumentation (406261)
Monday 06/05/2013	Project Engineering & Management (406262)	Digital Control (406262)
Wednesday 08/05/2013	Digital Control (406263)	Project Engineering and Management (406263)
Friday 10/05/2013	-------	**Elective – I (406264)** a) Biomedical Instrumentation b) Laser based Instrumentation c) Advanced Control Systems d) Building Automation – I
Tuesday 14/05/2013	**Elective I (406264)** a) Biomedical Instrumentation b) Instrumentation for Environmental Engineering c) Laser Application in Instrumentation d) Advanced Control System e) Building Automation – I	**Elective – II (406265)** a) Environmental Instrumentation b) Nano Instrumentation c) Advanced Digital Signal Processing d) Automobile Instrumentation

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Process Instrumentation – II (406267)	Process Dynamics and Control (406267)
Tuesday 21/05/2013	Computer Technology & Application (406268)	Industrial Automation (406268)
Thursday 23/05/2013	Industrial Automation (406269)	**Elective – III (406269)** a) Advanced Biomedical Instrumentation b) Fiber Optic Instrumentation c) Process Modeling and Optimization d) Building Automation - II
Monday 27/05/2013	**Elective – II (406270)** a) Adv. Biomedical Instrumentation b) Power Plant Instrumentation c) Fiber Optic Instrumentation d) Process Modeling & Optimization e) Building Automation – II	**Elective – IV (406270)** a) Instrumentation in Agriculture b) Micro Electro Mechanical Systems c) Digital Image Processing d) Open Elective

B.E. (BIOTECHNOLOGY)
Time – 2.30 to 5.30 p.m.
SEMESTER – I

Day & Date	2003 Course	2008 Course
Friday 03/05/2013	Enzyme and Fermentation Engineering (416282)	Bioseparation II (415463)
Monday 06/05/2013	Chemical Reaction Engineering – II (409343)	Instrumentation and Process Control (415464)
Wednesday 08/05/2013	Bioprocess Equipment Design (416283)	Bioprocess Equipment Design (415465)
Friday 10/05/2013	Novel Separation Techniques (416284)	**Elective – I (415461)** a) Environmental Biotechnology b) Chemoinformatics and Structural Biology c) Bio-therapeutics Technology
Tuesday 14/05/2013	**Elective I (416281)** a) Pharmaceutical Biotechnology b) Environmental Biotechnology c) Cosmetic Biotechnology d) Metabolic Engineering	**Elective – II (415462)** a) Bioenergy and Renewable Resources b) Biomaterials c) Stem Cell Biology and Regenerative Medicine

SEMESTER – II

Day & Date	2003 Course	2008 Course
Saturday 18/05/2013	Analytical Biotechnology (416287)	Bioprocess Modeling and Simulation (415469)
Tuesday 21/05/2013	Bioinformatics and Regulations (416288)	Plant Engineering & Project Costing (415470)
Thursday 23/05/2013	Plant Engineering (409289)	**Elective – III (415467)** a) Food Biotechnology b) Agricultural Biotechnology c) Introduction to Systems Biology
Monday 27/05/2013	**Elective II (416286)** a) Biomaterials b) Food Technology c) Nano Biotechnology d) Biothicks & Biosafety	**Elective – IV (415468)** a) Management and Entrepreneurship b) IPR, Bioethics and Regulations c) Industrial Organization and Management

SEMESTER – I

Day & Date	Automobile Engineering (2008 Course)
Friday 03/05/2013	Automotive Refrigeration and Air Conditioning (416488)
Monday 06/05/2013	Machine and Vehicle Dynamics (416489)
Wednesday 08/05/2013	Automotives System Design (416490)
Friday 10/05/2013	**Elective – I** 1. Automotive Aerodynamics and Styling (416491A) 2. Tribology (416491B) 3. CAD-CAM and Automation (416491C) 4. Automotive NVH (416491D)
Tuesday 14/05/2013	**Elective – II** 1. Automotive Materials (416492A) 2. Vehicle Safety (416492B) 3. Off Road Vehicles (416492C) 4. Auxilliary Engine Systems (416492D)

SEMESTER – II

Day & Date	Automobile Engineering (2008 Course)
Saturday 18/05/2013	Alternative Fuels and Emission Control (416494)
Tuesday 21/05/2013	Vehicle Performance and Testing (416495)
Thursday 23/05/2013	**Elective – III** 1. Computational Fluid Dynamics (416497A) 2. Finite Element Analysis (416497B) 3. Hydraulics and Pneumatics (416497C) 4. Product Development and Costing (416497D)
Monday 27/05/2013	**Elective – IV** 1. Transport Management and Motor Industry (416498A) 2. Energy Engineering and Management (416498B) 3. Hybrid, Electric and Fuel Cell Vehicles (416498C) 4. Open Electives

12. The Practical/Oral/Project Examination will be conducted from 10.04.2013 to 27-04-2013.

13. Candidates are permitted to use the stencils at the time of examination.

14. Candidates appearing for the examination are expected to provide themselves with slide-rules. The exchange or loan of slide-rules, drawing instrument or other material in the examination hall is not permitted while the examination is in progress. Candidates must bring their own instruments and will not be allowed to borrow the same from each other under any circumstances.

15. Use of non-programmable battery operated electronic calculator of pocket size is allowed. The exchange of calculator is not allowed.

16. This is the last chance for 2003 course.

Ganeshkhind, Pune-411007   B.D.Naik
Ref. / XCT /338   I/C Controller of Examinations
Date: 03/04/2013