



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

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**M.TECH ,M.E. ,M.DES, M.ARCH. FIRST SEMESTER EXAMINATION OF summer 2015**

# PROGRAMME( WRITTEN ) #

M.Tech,M.E,M.Des,M.Arch FIREST SEMESTER.summer 2015

**(518,520,523 to 538,540,554,555,572)**

**Time : 9.30 A.M. To 12.30 P.M.**

Sr. No.	Name of Branch	Day	Thursday	Tuesday	Thursday	Saturday	Tuesday
		Date	30-04-2015	05-05-2015	07-05-2015	09-05-2015	12-05-2015
1	<b>Structure Engineering</b>	Theory of Elasticity & Elastics Stability	Numerical Methods for Structural Analysis	Matrix Analysis of Structure	Structural Instrumentation & Material Science	Plastics Analysis and Design of Steel Structure	
2	<b>Computer Aided Design Manufacture &amp; Automation</b>	Control System Engineering	Cim	<b>Elective – I</b>	Computer Graphics for Cad/Cam	CNC & Robotics	
3	<b>Computer Science Engineering</b>	High Performance Computer Architecture	Advanced in Operating System Design	Object Oriented System	<b>Elective-I</b>	<b>Elective-II</b>	
4	<b>CAD/CAM</b>	Data Structures and Algorithms	Cim	<b>Elective-I</b>	Computer Graphic for Cad/Cam	CNC & Robotics	
5	<b>M.E.[ Embedded System &amp; Comp.]</b>	Microcontroller for Embedded System Design	Embedded System Concept	Advanced Computer Architecture	<b>Elective-I</b>	<b>Elective-II</b>	
6	<b>Environmental Engineering</b>	Computational Methods	Environmental Chemistry & Microbiology	Municipal & Industrial Water Treatment	Water Supply & Waste Water Collection	Municipal Waste Water Treatment & Disposal	
7	<b>Chemical Technology</b>	Modern Chemical Technology (Oil, Food, Paint, Petro,)	Science & Technology of Materials (Oil, Food, Paint, Petro,)	Special Technology – I (Oil, Food, Paint, Petro,)	Special Technology – II (Oil, Food, Paint, Petro,)	Special Technology – III (Oil, Food, Paint, Petro,)	
8	<b>I.D.C.</b>	Micro-controller & Its Application	Advanced Power Electronics	Advanced Control System	Analysis of Electrical Machines	D.C. Drives	
9	<b>VLSI</b>	VLSI Sub-system Design	Modeling of Digital System – I	Switching Theory and Automata	Advanced Digital Signal Processing	Embedded System	
10	<b>Mech. Engineerin &amp; Design</b>	Applied Mathematics	Advanced Mechanism	Dynamics of Machinery	Computer Aided Mechanical Design	Vibration Analysis	

11	<b>Electronics Engineering Communication</b>	Optical Communication	Computer Communication Network	Advanced D S P	VLSI Signal Processing	Error Control Coding
12	<b>Geo Technical Engineering (P.T.)</b>	Computer Programming Numerical Analysis	Geo Science	Geotechnical Exploration & Investigations	*****	*****
13	<b>Integrated Power System</b>	Advanced Power Electronics	Advanced Control Theory	Hvdc Power Transmission	Switchgear and Protection	Power System Modeling
14	<b>Heat Power Engineering</b>	Heat Transfer – I	Advanced Thermodynamics	Thermal Engineering – I	Advanced Energy Technology	Computer Aided Design
15	<b>Chemical Engineering</b>	Modern Chemical Instrumentation	Science & Technology of Materials	Momentum & Heat Transfer	Advanced Chemical Reaction Engineering	Plant Design
16	<b>Industrial Engineering</b>	Operation Research	Computer And Data Base Management	Personnel Management And Industrial Relations	Statistics And Quality Control	Planning And Controlling Of Manufacturing System
17	<b>M.E. [Wireless Comm. &amp; Comp.]</b>	Wireless Communication & Networks	Tcp / Ip & Internet	Digital Signal Processing	<b>Elective-I</b>	<b>Elective-II</b>
18	<b>Power Electronics &amp; Power System</b>	Advanced Power Electronics	Electric Power Distribution System	Hvdc Power Transmission	Power System Modeling	Processor Application To Electrical / Power System
19	<b>Electronics Engineering</b>	Digital Communication	VLSI Circuits	Advanced Digital Signal Processing	Fuzzy Logic Neural Networks	Programming & Data Structures
20	<b>M.Des[Industrial Design]</b>	History of Design	Material & Process	*****	*****	*****
21	<b>M. Arch. (In Arch. Education)</b>	Introduction to Learning Methods	Pedagogy of Architecture Education	Transmission of Knowledge In Building	Traditions of Teaching Methods	*****

### GENERAL INSTRUCTIONS FOR SEATING ARRANGEMENT

The name of the College Centre is already printed on the Admission Card of each Candidate. However, it is notified for general information of the Candidates that: -

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NAGPUR:

Dated: 15<sup>th</sup> January 2015

Controller of Examinations  
Rashtrasant Tukadoji Maharaj Nagpur University

**P. T. O. ( List of Electives)**

## List of M.TECH. & M.E. Electives.

Sr. No	Name of Branch	Elective-I	Elective-II
2.	<b>Computer Aided Design Manufacture &amp; Automation</b>	<ol style="list-style-type: none"> <li>1. Tool Design</li> <li>2. Rapid Prototyping and Tooling</li> <li>3. Engineering Experimentation Techniques</li> </ol>	*****
3.	<b>Computer Science Engineering</b>	<ol style="list-style-type: none"> <li>1. Ai &amp; Expert System Design</li> <li>2. Data Warehousing &amp; Raining</li> </ol>	<ol style="list-style-type: none"> <li>1. Naural Network &amp; Fuzzy System</li> <li>2. Real Time System</li> <li>3. Mibile Computing</li> </ol>
4.	<b>CAD/CAM</b>	<ol style="list-style-type: none"> <li>1. Material Engg.</li> <li>2. Image Processing</li> <li>3. Engg. Managementp</li> <li>4. Total Quality System &amp; Engg.</li> </ol>	*****
5.	<b>M.E. Embedded System &amp; Comp.</b>	<ol style="list-style-type: none"> <li>1. Object Oriented System</li> <li>2. Function / Arch. Optim. &amp; Co-design of Embedded System</li> <li>3. Cpld and Fpga Arch. And Applications</li> </ol>	<ol style="list-style-type: none"> <li>1. Soft Computing</li> <li>2. Mobile Computing</li> <li>3. System Modeling &amp; Simulation</li> </ol>
10	<b>Energy Mangt. System</b>	<ol style="list-style-type: none"> <li>1. Advance Control System</li> <li>2. Heat &amp; Mass Transfer</li> <li>3. Urban Energy Planning &amp; Management – I Strength &amp; Selection of Energy Efficient Material</li> </ol>	<ol style="list-style-type: none"> <li>1. Bio Mass Conversion for Energy Generation</li> <li>2. Power System Control &amp; Analysis</li> <li>3. Microprocessor and Micro Controller Maintenance Engineering</li> </ol>
17	<b>M.E. Wireless Comm. &amp; Comp.</b>	<ol style="list-style-type: none"> <li>1. Object Oriented System</li> <li>2. Distributed Computing</li> <li>3. Multimedia Communication</li> </ol>	<ol style="list-style-type: none"> <li>1. Soft. Computing</li> <li>2. Modile &amp; Adaptive Systems</li> <li>3. Design &amp; Modeling of Mobile Protocols</li> </ol>



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

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**M.TECH ,M.E. ,M.DES, M.ARCH. SECOND SEMESTER EXAMINATION OF summer 2015**

# PROGRAMME( WRITTEN ) # M.Tech,M.E,M.Des,M.Arch SECOND SEMESTER. Summer 2015  
(782,784,787 To 794,796 To 803, 812,814,816,834.)

**Time : 9.30 A.M. To 12.300 P.M.**

Sr. No	Name of Branch	Day	Friday	Monday	Thursday	Monday	Wednesday
		Date	15-05-2015	18-05-2015	21-05-2015	25-05-2015	27-05-2015
1	<b>Structure Engineering</b>		Theory of Plates & Shell	Finite Element Method	Foundation Design	Structural Dynamics	<b>Elective-I</b>
2	<b>Computer Aided Design Manufacture &amp; Automation</b>		Hydraulics & Pneumatic System	Modeling & Simulation	Mechatronic for Automation	Fem	<b>Elective-II</b>
3	<b>Computer Science Engineering</b>		Advanced in Algorithm	Tcp/ip & Internet	Advanced Digital Image Processing	<b>Elective-III</b>	<b>Elective-IV</b>
4	<b>CAD/CAM</b>		Artificial Intelligence	Modeling of Simulation	Product Data Management	Fem	<b>Elective-II</b>
5	<b>M.E.[ Embedded System &amp; Comp.]</b>		Advanced in Algorithms	<b>Elective-IV</b>	Real Time – Operating System for Embedded System	<b>Elective-III</b>	Embedded Software Design
6	<b>Environmental Engineering</b>		Industrial Waste Water Treatment and Disposal	Environment Management	Air Quality Management	Municipal Solid Waste Management	<b>Elective-I</b>
7	<b>Chemical Technology</b>		Bio-technology / Industrial Fermentation (Oil, Food, Paint, Petro,)	Environmental Engineering (Oil, Food, Paint, Petro,)	Special Technology – IV (Oil, Food, Paint, Petro,)	Special Technology – V (Oil, Food, Paint, Petro,)	Special Technology – VI (Oil, Food, Paint, Petro,)
8	<b>I.D.C.</b>		Digital Control System	Artificial Neural Network & Fuzzy Logic	A.C. Drives	Digital Signal Processing	<b>Elective-I</b>
9	<b>VLSI</b>		Analog VLSI Design	Modeling of Digital System – II	VLSI Signal Processing	Digital Image Processing	<b>Elective-I</b>
10	<b>Mech. Engineering &amp; Design</b>		Advanced Mechanical Drives	Optimization in Engg. Design	Robotic	Stress Analysis	Finite Elements Analysis
11	<b>Electronics Engineering Communication</b>		Advanced Digital Satellite Communication	Digital System Design	Digital Image Processing	Advanced Communication System	<b>Elective-I</b>

12	<b>Geo Technical Engineering (P.T.)</b>	Advanced Soil Mechanics	Applied Soil Engineering	Foundation Engg. – I	-----	-----
13	<b>Integrated Power System</b>	Processor Applications to Power System	Advanced Electrical Drives of Controls	Special Topics in Power System	Energy System Management	-----
14	<b>Heat Power Engineering</b>	Fluid Dynamics	Heat Transfer – II	Refrigeration & Conditioning Technology	Thermal Engineering – II	<b>Elective-I</b>
15	<b>Chemical Engineering</b>	Bio Technology	Environmental Engineering	Mass Transfer	Optimization and Mathematical Modeling	Process Dynamics Control
16	<b>M.E.[ Wireless Comm. &amp; Comp.]</b>	Advance in Algorithms	Network Security & Cryptography	Real-time Operating System for Embedded System	<b>Elective-III</b>	<b>Elective-IV</b>
17	<b>Industrial Engineering</b>	Automation In Production	Methods Engineering And Ergonomics	Manufacturing Economics And Analysis	Project Evaluation And Management	Maintenance Engineering
18	<b>Power Electronics &amp; Power System</b>	Advanced Power Electronics Drives	Advanced Control Theory	<b>Elective-I</b>	Energy Management System	Power Electronics Applications to Power System
19	<b>Electronics Engineering</b>	Digital Systems Design	Digital Image Processing	Data Communication	Microcontroller & Their Application	<b>Elective-I</b>
20	<b>M.Des.[Industrial Design]</b>	Product Development	Human Factor Design	-----	-----	-----
21	<b>M. Arch. (In Arch. Education)</b>	Research Methodology	Appreciation & Criticism	History of Contemporary Architecture Education	-----	-----

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NAGPUR:

Dated: 15 January 2015

Controller of Examinations  
Rashtrasant Tukadoji Maharaj Nagpur University

**P. T. O. (List of Electives)**

### List of M.TECH. Electives.

Sr. No.	Name of Branch	Elective-I	Elective-II	Elective-III	Elective-IV
1.	<b>Structure Engineering</b>	4. ADVANCED Steen Design 5. Design of Earthquake Resistant Structures 6. Design Environmental Structures	*****	*****	*****
2.	<b>Computer Aided Design Manufacture &amp; Automation</b>	*****	1. Data Communications in Cad/cam 2. Design Optimization Techniques 3. Micro Electro Mechanical System	*****	*****
3.	<b>Computer Science Engineering</b>	*****	*****	1. Dist. System 2. Software Engg. 3. Pattern Recognition	1. Embedded System 2. Cryptography & Network Security 3. Multimedia System
4.	<b>CAD/CAM</b>	*****	1. Mechatronics 2. Comp. aided Toll Design 3. Plastics & Composites 4. Cfd	*****	*****
5.	<b>M.E. Embedded System &amp; Comp.</b>	*****	*****	1. Wireless Communication & Networks 2. Intelligent Embedded Systems 3. Principles of Embedded Network System Design	1. Tct/ip & Internet 2. Satellite Communication 3. Network Security & Cryptography
6.	<b>Environmental Engineering</b>	4. Hazardous Water Management System Optimization 5. Water Resource Management Sanitation 6. Applied Structure	*****	*****	*****

8.	<b>I.D.C.</b>	1. Drives System Design & Simulation 2. Distributed Control System 3. Software Engineering	*****	*****	*****
9.	<b>VLSI</b>	1. Adv. com. Archtr 2. Low Power VLSI Design 3. Embedded System II	*****	*****	*****
10.	<b>Energy Mangt. System</b>	*****	****	1. Advanced Power Electronics 2. Power Plant Engineering 3. Urban Energy Planning & Management – II	1. Advanced Electrical Drives 2. Advanced Engine Technology & Automobile 3. Building Architecture & Energy Conservation 4. Intellectual Property Rights
12.	<b>Electronics Engineering Communication</b>	1. Fuzzy & Neural Network 2. Multimedia Communication System 3. Dsp Processor & Architecture	****	****	****
15.	<b>Heat Power Engineering</b>	1. Energy Conservation & Management 2. Advance Cryogenics System	*****	*****	*****
17.	<b>M.E. Wireless Comm. &amp; Comp.</b>	*****	*****	1 Dsp Processors & Architecture 2 Signal Processing & Smart Antennas for Wireless Connection 3 Principles of Embedded Network System Design	1. Embedded Software Design 2. Satellite Communication 3. Digital Image Processing
18.	<b>Power Electronics &amp; Power System</b>	1. Power Quality 2. Advanced Power System Protection 3. Renewable Power Generation Sources	*****	*****	*****
19.	<b>Electronics Engineering</b>	1. Pattern Recognition 2. Analog VLSI Design 3. Computer Graphic	*****	*****	*****



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

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**M.TECH, M.E., M.DES, M.ARCH. THIRD SEMESTER EXAMINATION OF summer 2015**

# PROGRAMME (WRITTEN) #

M.Tech,M.E,M.Des,M.Arch THIRD SEMESTER. summer 2015  
(519,521,522,539,541 to 552,556,557,573.)

**Time : 2.00 P.M. To 05.00 P.M.**

Sr. No	Name of Branch	Day	Saturday	Wednesday	Friday
		Date	02-05-2015	06-05-2015	08-05-2015
1	Structure Engineering		Advanced Concrete Structure	Elective-II	*****
2	Computer Aided Design Manufacture & Automation		Production Design & Development	Flexible Manufacturing System	*****
3	CAD/CAM		Manufacturing System Integration & Management	Product Design & Development	*****
4	M.E. [Embedded System & Comp.]		Designing Embedded Communication Software	Distributed Embedded System & Computing	*****
5	Environmental Engineering		Elective-II	*****	*****
6	I.D.C.		Advanced Drives	Elective-II	*****
7	VLSI		VLSI Testing	Elective-II	*****
8	Mech. Engineering & Design		Ratability Maintainability & Wear	Elective-I	*****
9	Electronics Engineering Communication		Signal Processing & Smart Antenna for Wireless Communication	Elective-II	*****
10	Geo Technical Engineering (P.T.)		Dynamics of Soil & Foundation	Ground Improvement	** Foundation Engg-II
11	Integrated Power System		Power System Stability	Power System Planning	*****
12	Heat Power Engineering		Thermal Storage Systems	Elective-II	*****



<b>13</b>	<b>Chemical Engineering</b>	<b>Elective-I</b>	*****	*****
<b>14</b>	<b>M.E. [Wireless Comm. &amp; Comp.]</b>	Mobile Computing	Ad Hoc Wireless Networks	*****
<b>15</b>	<b>Power Electronics &amp; Power System</b>	Power System Dynamics and Control	<b>Elective-II</b>	*****
<b>16</b>	<b>Electronics Engineering</b>	Parallel Processing & Algorithm	<b>Elective-II</b>	*****
<b>17</b>	<b>M.Des.[Industrial Design]</b>	Product Planning and Marketing	*****	*****
<b>18</b>	<b>M. Arch. (In Arch. Education)</b>	Design Philosophy & Learning Methods	Construction Principles & Methods	Behavior & Expression of Structures

**\*\* Note : Timing of these papers only will be 2.00 P.M. to 6.00 P.M.**

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NAGPUR:

Dated: 15<sup>th</sup> January 2015

Controller of Examinations  
Rashtrasant Tukadoji Maharaj Nagpur University

**P. T. O. (List of Electives)**

## List of M.TECH. Electives.

Sr. No	Name of Branch	Elective-I	Elective-II
1.	Structure Engineering	*****	1. High Rise Structures 2. Design Of Composites Construction 3. New Engineering Materials & Technology
5.	Environmental Engineering	*****	4. Environmental System Optimization 5. Rural Water Supply & Sanitation
6.	I.D.C.	*****	1. Process Control & Digital Instrumentations 2. Mechatronics 3. Management Information System
7.	VLSI	*****	1. Mixed Signal Processing 2. Computer Communication Network 3. Computer Graphics
9.	Mech. Engineering & Design	4. Mechanization in Food Processing 5. Design of Mech. Handling System 6. Vibration Based Condition Monitoring 7. Design of Hydraulic & Pneumatic Systems	*****
10	Electronics Engineering Communication	*****	1. Embedded System 2. Micro Strip Integrated System 3. Modern Radar System
13	Heat Power Engineering	*****	1. Design of Heat Exchangers 2. Design of I.C. Engine Components & Sub System
14	Chemical Engineering	4. Enter & Communication Skill 5. Neural Network & Fuzly System 6. Research Methodology 7. Advanced Mathematics	*****
16	Power Electronics & Power System	*****	1. Digital Signal Processing 2. Artificial Intelligence Based System 3. Microcontroller Application in Power Converters
17	Electronics Engineering	*****	1. Programmable Devices & Testing 2. IP Core and RTOS 3. Mobile Communication