

**MANDATORY DISCLOSURE FOR THE ACADEMIC YEAR  
2009-10  
BY INSTITUTIONS  
RUNNING AICTE APPROVED  
ENGINEERING/TECHNOLOGY/PHARMACY PROGRAMMES**

**SUBMITTED BY**



**NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS' TRAINING AND RESEARCH  
BLOCK – FC, SECTOR – III, SALT LAKE CITY  
KOLKATA – 700 106**



**MANDATORY DISCLOSURE BY INSTITUTIONS RUNNING AICTE APPROVED ENGINEERING/TECHNOLOGY/PHARMACY PROGRAMMES TO BE INCLUDED IN OUR RESPECTIVE INFORMATION BROCHURE, DISPLAYED ON OUR WEBSITE AND TO BE SUBMITTED TO AICTE EVERY YEAR TOGETHER WITH ITS URL**

The following information is to be given in the Information Brochure besides being hosted on the Institution's official Website.

**"The information has been provided by the concerned institution and the onus of authenticity lies with the institution and not on AICTE."**

**I. NAME OF THE INSTITUTION**

National Institute of Technical Teachers' Training and Research  
Block - FC, Sector - III, Salt Lake City, Kolkata - 700 106  
Tel No. (033) 2337-0479/4125, Fax: (033) 2337-6331  
E-mail: director\_nitttr\_kol@yahoo.com

**II. Name & Address of the Director**

Prof. S. K. Bhattacharyya  
Director  
Block – FC, Sector – III, Salt Lake City, Kolkata – 700 106  
Tel No. (033) 2337-0479 / 4125, 0937 (Direct), Fax: (033) 2337-6331  
E-mail: director\_nitttr\_kol@yahoo.com

**III. NAME OF THE AFFILIATING UNIVERSITY**

West Bengal University of Technology  
BF-142, Sector - I, Salt Lake, Kolkata - 700 064, West Bengal

#### IV. GOVERNANCE

##### ❖ Members of the Board and their brief background

#### LIST OF BOG MEMBERS

##### Sl. No. Name / Designation & Address

1. Dr. Sushanta Dattagupta  
Chairman, BOG / Society, NITTTR, Kolkata  
Director  
Indian Institute of Science Education and Research  
IIT Campus  
B2-HC, Salt Lake City, Kolkata – 700 098
2. Sri Ashok Thakur, IAS  
Additional Secretary of Govt of India  
Ministry of Human Resource Development  
Government of India, Shastri Bhavan  
New Delhi-110001
3. Representative of Tech. Education Bureau  
Ministry of Human Resource Development  
Government. of India, Shastri Bhavan  
New Delhi -110001
4. Dr Sajal Dasgupta  
Director of Technical Education  
Government of West Bengal  
Bikas Bhavan, 10<sup>th</sup> Floor  
Sector-III, Salt Lake City  
Kolkata -700091
5. Sri N B S Rajput, IAS  
Director of Technical Education & Training  
Government of Orissa
6. Dr. Dhruv Prasad  
Director  
Department of Science & Technology  
Government of Bihar, Technology Bhavan  
Bailly Road  
Patna -800001
7. Shri V K Jeyakodi, IAS  
Principal Secretary  
Dept of Technical Education  
Government of Tamil Nadu,
8. Dr. G Narendra  
Director of Training and Technical Education  
Government of Delhi
9. Sri Alok Bhattacharya  
Advisor WEBEL, Govt of WB  
Webel Bhawan, Sector – V, Saltlake, Kolkata 700 091
10. Shri G. Chatterjee

**Sl. No. Name / Designation & Address**

- Director (Industrial), Exide Industries Ltd.  
Exide House 59E, Chowringee Road, Kolkata-700020
11. AICTE,  
IG Sports Complex  
IP Estate, New Delhi-110002
12. Dr. S Sengupta  
Vice Chancellor (Region)  
West Bengal University of Technology  
BF-142, Salt Lake City, Kolkata -700091
13. Dr. P. Sarker  
Faculty Representative,  
Professor, Education  
NITTTR, Kolkata-700106
14. Prof. S. K. Bhattacharyya  
Member Secretary  
Director  
NITTTR, Kolkata – 700 106

**❖ Members of Academic Advisory Body**

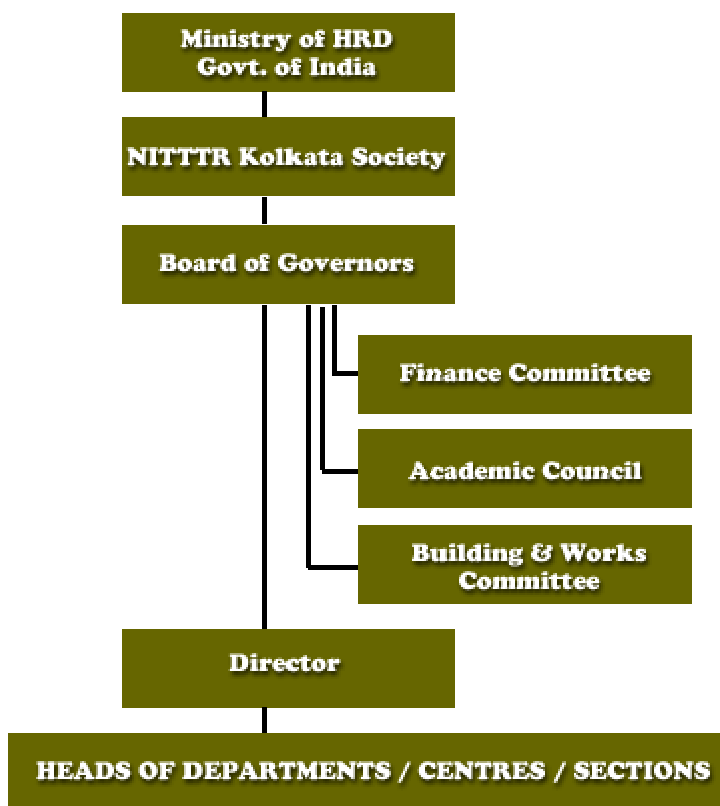
Members of the Academic Council for the Year 2009-10 (July to June)

Sl.No.	Name	Designation	Membership Status
1.	Prof. S. K. Bhattacharyya	Director, NITTTR, Kolkata	Ex-Officio Chairman
2.	Dr. S. Mandal	Professor of Mech. Engg. Dept., NITTTR, Kolkata	Secretary
3	Dr. S. ray	Professor and HoD of Mech. Engg. Dept., NITTTR, Kolkata	
3.	Dr. R. Srinivasan	Professor of Edn. Dept., NITTTR, Kolkata	Member
5.	Dr. P. Sarkar	Professor of EE Dept., NITTTR, Kolkata	Member
4.	Dr. R. Dasgupta	Professor of CSE Dept., NITTTR, Kolkata	Member
6.	Prof. M. Das	Professor of Civil Engg. Dept., NITTTR, Kolkata	Member
7.	Dr. S. Chakraborty	Professor of EDPM. Dept., NITTTR, Kolkata	Member
8.	Dr. (Mrs.) A. De	Professor of Science Dept., NITTTR, Kolkata	Member
9.	Dr. D. Bose	Professor of Mech. Engg. Dept., NITTTR, Kolkata	Member
10.	Dr. U. C. Kumar	Professor of CDRT. Dept. NITTTR, Kolkata	Member
11.	Dr. (Mrs.) Urmila	Professor of CDC. Dept., NITTTR,	Member

	Kar	Kolkata	
12.	Dr. J. J. Mandal	Professor of Civil Engg. Dept., NITTTR, Kolkata	Member
13.	Dr. R. Roy	Asst. Professor of Edn.. Dept., NITTTR, Kolkata	Nominated Member
14.	Dr. S. Chattopadhyay	Asst. Professor of EE Department, NITTTR, Kolkata	Nominated Member
15.	Dr. H. Hussian	Sr. Lecturer of Edn. Dept. NITTTR, Kolkata	Nominated Member
16.	Ms.. Mithu De	Lecturer of Civil Engg. Dept., NITTTR, Kolkata	Nominated Member
17.	Prof. Manoj Mitra	Professor of Metallurgical Engg., Dean, Faculty of Engineering & Technology Jadavpur University, Kolkata- 700 032	External Member
18.	Dr. Krishnendu Chakraborty	Principal, Techno India, Salt Lake EM-4/1, Sector-V, Salt Lake City, Kolkata-700 091	External Member

❖ Frequency of the Board Meetings and Academic Advisory Body - 2 & 4

❖ Organizational chart and processes



- ❖ Nature and Extent of involvement of faculty and students in academic affairs/improvements

- *Regular feedback is taken to improve the academic performance.*

- ❖ Mechanism/Norms & Procedure for democratic/good Governance
- ❖ Student Feedback on Institutional Governance/faculty performance
- ❖ Grievance redressal mechanism for faculty, staff and students

## V. PROGRAMMES

- ❖ Name of the Programmes approved by the AICTE

1. M.Tech. in Manufacturing Technology
2. M.Tech. in Multimedia & Software Systems
3. M.Tech. in Mechatronics Engineering

- ❖ Name of the Programmes accredited by the AICTE

- ❖ For each Programme the following details are to be given:

- Name : M.Tech. in Manufacturing Technology
- Number of seats : 28  
*\*(From 2008-09 session, after implementation of reservation for OBC candidates)*
- Duration : 2 yrs.
- Cut off mark/rank for admission during the last three years
- Fee : Rs. 6000/- per semester
- Placement Facilities :
  - *All the passout of the first programme of Manufacturing Technology has been placed successfully in the various institute/industries.*
- Campus placement in last three years with minimum salary, maximum salary and average salary : NA
- Name : M.Tech. in Multimedia & Software Systems
- Number of seats : 28  
*\*(From 2008-09 session, after implementation of reservation for OBC candidates)*
- Duration : 2 yrs.
- Cut off mark/rank for admission during the last three years
- Fee Rs. 6000/- per semester
- Placement Facilities

- Campus placement in last three years with minimum salary, maximum salary and average salary : NA
  - Name : M.Tech. in Mechatronics Engineering
  - Number of seats : 28
  - Duration : 2 yrs.
  - Cut off mark/rank for admission during the last three years
  - Fee : Rs. 6000/- per semester
  - Placement Facilities
  - Campus placement in last three years with minimum salary, maximum salary and average salary : NA
- ❖ Name and duration of programme(s) having affiliation/collaboration with Foreign University(s)/Institution(s) and being run in the same Campus along with status of their AICTE approval. If there is foreign collaboration, give the following details:

Details of the Foreign Institution/University: NA

- Name of the University/Institution
  - Address
  - Website
  - Is the Institution/University Accredited in its Home Country
  - Ranking of the Institution/University in the Home Country
  - Whether the degree offered is equivalent to an Indian Degree? If yes, the name of the agency which has approved equivalence. If no, implications for students in terms of pursuit of higher studies in India and abroad and job both within and outside the country.
  - Nature of Collaboration
  - Conditions of Collaboration
  - Complete details of payment a student has to make to get the full benefit of collaboration.
- ❖ For each Collaborative/affiliated Programme give the following:
- Programme Focus
  - Number of seats
  - Admission Procedure
  - Fee
  - Placement Facility
  - Placement Records for last three years with minimum salary, maximum salary and average salary



- ❖ Whether the Collaborative Programme is approved by AICTE? If not whether the Domestic/Foreign Institution has applied to AICTE for approval as required under notification no. 37-3/Legal/2005 dated 16<sup>th</sup> May, 2005

## VI. FACULTY

- ❖ Branch wise list of faculty members:

- Permanent Faculty

Name of the Course (PG Level)	S.No.	Name (s) of the Teaching Faculty	Designation (Lecturer/ Asst. Professor/ Professor)
Manufacturing Technology	1.	Dr. S. Ray	Professor & HOD
	2.	Dr. S. Mandal	Professor
	3.	Dr. D. Bose	Professor
	4.	Mr. N. K. Mandal	Asst. Professor
	5.	Dr. R. Srinivasan	Professor
	6.	Dr.(Mrs.) A. De	Professor
	7.	Dr. S. Chakraborty	Professor
	8.	Dr. S. N. Mandal	Asst. Professor
Multimedia & Software Systems	1.	Dr. S. Majumdar	Professor ( <i>on lien</i> )
	2.	Dr. R. Dasgupta	Professor & HOD
	3.	Dr. S. Roy	Asst. Professor
	4.	Mr. R. Chatterjee	Sr. Lecturer
	5.	Dr. S. Ray	Professor
Mechatronics Engineering	1.	Dr. P. Sarkar	Professor & HOD
	2.	Dr. S. Chattopadhyay	Asst. Professor & Prof.-in-Charge, PG Studies
	3.	Dr. S. K. Mandal	Asst. Professor
	4.	Dr. S. Pal	Sr. Lecturer
	5.	Shri N. K. Mandal	Asst. Professor
	6.	Shri S. K. Naskar	Asst. Professor
	7.	Dr. S. Chakraborty	Professor
	8.	Dr. D. Bose	Professor
	9.	Dr. S. Mandal	Professor
	10.	Dr. S. N. Mandal	Asst. Professor

- Visiting Faculty

Name of the Course (PG Level)	S.No.	Name (s) of the Visiting Faculty
Manufacturing Technology	1.	Dr. R. K. Bera, Prof., HIT, Kolkata
	2.	Dr. J. Saha, Prof., Jadavpur University, Kolkata
	3.	Dr. A. B. Chattopadhyay, Prof., IIT, Kharagpur


	4.	Dr. B. Bhattacharyya, Professor, Jadavpur University
	5.	Dr. B. Sarkar, Prof., Jadavpur University, Kolkata
	6.	Mr. A. Mukherjee, Ex. Manager, ESAB India Ltd.
	7.	Dr. Ajoy Chattopadhyay, Professor, IIT, Kharagpur
Multimedia & Software Systems	1.	Dr. Subhansu Bandyopadhyay, Prof., Calcutta University, Kolkata
	2.	Dr. Swapan Bhattacharya, Prof., Jadavpur University, Kolkata
	3.	Dr. Pradip Kr. Das, Prof., Jadavpur University, Kolkata
	4.	Dr. P. N. Basu, Prof., Jadavpur University, Kolkata
	5.	Shri Chandan Majumdar, Prof., Jadavpur University, Kolkata
	6.	Dr. Nabendu Chaki, Lecturer, Calcutta University, Kolkata
	7.	Shri Sankhayan Chowdhury, Lecturer, Calcutta University, Kolkata
	8.	Dr. Rasajit Kr. Bera, Prof., HIT, Kolkata
	9.	Dr. Barun Kr. Dutta, Prof., Chakdah College, Chakdah
	10.	Mr. Diptendu Dutta, Expert from Industry
	11.	Mr. Debashis Jana, Expert from Industry
	12.	Dr. B. B. Bhaumik, Prof., Jadavpur University
	13.	Mr. Amlan Chakraborty, University of Calcutta
Mechatronics Engineering	1.	Dr. Rasajit Kr. Bera, Prof., HIT, Kolkata
	2.	Dr. Barun Kr. Dutta, Prof., Chakdah College, Chakdah
	3.	Dr. A. Sinha, Prof., West Bengal University of Technology

- Adjunct Faculty
  - Guest Faculty
  - Permanent Faculty: Student Ratio - 1:3
- ❖ Number of faculty employed and left during the last three years  
Number of faculty employed last three years : 3 Nos.

**VII. PROFILE OF DIRECTOR/PRINCIPAL WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

For each Faculty give a page covering

- Enclosed in Annexure – IA, IIA, IIIA

- |     |                                     |   |   |   |
|-----|-------------------------------------|---|---|---|
| 1.  | Name                                | : | Prof. Sanjay Kumar Bhattacharyya  |  |
| 2.  | Date of Birth                       | : | 20 <sup>th</sup> July 1952  |   |
| 3.  | Educational qualification           | : | BME (Hons), Fellow in Management  |   |
| 4.  | Work Experience                     |   |   |   |
|     | - Teaching                          | : | 10 Yrs.   |   |
|     | - Research                          | : | 05 Yrs.   |   |
|     | - Industry                          | : | 15 Yrs.   |   |
|     | - Others                            | : | 05 Yrs.   |   |
| 5.  | Area of Specializations             | : | General Management, Strategic Planning  |   |
| 6.  | Subject teaching at                 |   |   |   |
|     | Under Graduate Level                | : | Nil   |   |
|     | Post Graduate Level                 | : | Different topics in Management  |   |
| 7.  | Research guidance                   | : |   |   |
|     | Master's                            | - | 100 Nos.  |   |
|     | Ph.D                                | - | Nil   |   |
|     |                                     |   | Number of papers published in-<br>National journals - 6 Nos.<br>International journals - 6 Nos.<br>Conference-<br>National - Numerous<br>International - Numerous |   |
| 8.  | Project Carried out                 | : | Numerous for indigenous and international agencies  |   |
| 9.  | Patents                             | : | Nil   |   |
| 10. | Technology Transfer                 | : | Nil   |   |
| 11. | Research Publications               | : | Nil   |   |
| 12. | No. of Books published with details | : | Nil   |   |

## VIII. Fee

- ❖ Details of fee, as approved by State fee Committee, for the Institution.
- ❖ Time schedule for payment of fee for the entire programme.
- ❖ No. of Fee waivers granted with amount and name of students.
- ❖ Number of scholarship offered by the institute, duration and amount
- ❖ Criteria for fee waivers/scholarship.
- ❖ Estimated cost of Boarding and Lodging in Hostels - Rs. 2500/- (Approx.)

## IX. ADMISSION

- ❖ Number of seats sanctioned with the year of approval.
- ❖ Number of students admitted under various categories each year in the last three years.

Courses	1 <sup>st</sup> Year of approval by AICTE (give approval ref. no. & date)	2007-2008		2008-2009		2009-2010	
		Sanctioned intake	Sanctioned intake	Sanctioned intake	Actual admissions	Sanctioned intake	Actual admissions
M.Tech. in Manufacturing Technology	XVIII- AIBPG/APP/ET/2002 dt. 8.8.02	18	14	28	13	28	17
M.Tech. in Multimedia & Software Systems	Ref No. Nil Dt. 22.7.05	18	17	28	27	28	28
M.Tech. in Mechatronics Engg.	Ref No. Nil Dt. 22.7.05	18	17	28	21	28	25

- ❖ Number of applications received during last two years for admission under Management Quota and number admitted - NA

## X. ADMISSION PROCEDURE

- *Through structured interview by the selection committee with external experts.*
- ❖ Mention the admission test being followed, name and address of the Test Agency and its URL (website).
- ❖ Number of seats allotted to different Test Qualified candidates separately [AIEEE/CET (State conducted test/University tests)/ Association conducted test]
- ❖ Calendar for admission against management/vacant seats:
  - Last date for request for applications.
  - Last date for submission of application.
  - Dates for announcing final results.
  - Release of admission list (main list and waiting list should be announced on the same day)
  - Date for acceptance by the candidate (time given should in no case be less than 15 days)
  - Last date for closing of admission.

- Starting of the Academic session.
- The waiting list should be activated only on the expiry of date of main list.
- The policy of refund of the fee, in case of withdrawal, should be clearly notified.

## **XI. CRITERIA AND WEIGHTAGES FOR ADMISSION**

- ❖ Describe each criteria with its respective weightages i.e. Admission Test, marks in qualifying examination etc.
  - ❖ Mention the minimum level of acceptance, if any.
  - ❖ Mention the cut-off levels of percentage & percentile scores of the candidates in the admission test for the last three years.
  - ❖ Display marks scored in Test etc. and in aggregate for all candidates who were admitted.
- *Criteria and weightages for admission varies with the discipline. Criteria for different discipline has been followed as below:*

*Manufacturing Technology :* 75% or above marks in B.E./B.Tech. or equivalent examination followed by standard interview.

*Multimedia and Software Systems :* 75% or above marks in B.E./B.Tech./MCA or equivalent examination followed by standard interview.

*Mechatronics Engineering :* 75% or above marks in B.E./B.Tech. or equivalent examination followed by standard interview.

**Item No I - XI must be given in information brochure and must be hosted as fixed content in the website of the Institution.**

**The Website must be dynamically updated with regard to XII-XV.**

## **XII. APPLICATION FORM**

- ❖ Downloadable application form, with online submission possibilities.

## **XIII. LIST OF APPLICANTS**

- ❖ List of candidates whose applications have been received along with percentile/percentage score for each of the qualifying examination in separate categories for open seats. List of candidates who have applied along with percentage and percentile score for Management quota seats.

- Enclosed in Annexure - IV

#### XIV. RESULTS OF ADMISSION UNDER MANAGEMENT SEATS/VACANT SEATS

- ❖ Composition of selection team for admission under Management Quota with the brief profiles of members (This information be made available in the public domain after the admission process is over)
- ❖ Score of the individual candidates admitted arranged in order of merit.
- ❖ List of candidates who have been offered admission.
- ❖ Waiting list of the candidates in order of merit to be operative from the last date of joining of the first list candidates.
- ❖ List of the candidates who joined within the date, vacancy position in each category before operation of waiting list.

#### XV. INFORMATION ON INFRASTRUCTURE AND OTHER RESOURCES AVAILABLE

##### LIBRARY:

- Number of Library books/Titles/Journals available (programme-wise)
- List of online National/International Journals subscribed.
- E-Library facilities - No

S.No	Course(s)	Number of titles of the books	Journals	
			National	International
1.	M.Tech. in Manufacturing Technology	2250 (appx.)	-	E-journals, all IEEE, IEE, ASME, ASCE, online issues are being subscribed
2.	M.Tech. in Multimedia & Software Systems	1525	-	
3.	M.Tech. in Mechatronics Engineering	9950	-	

##### LABORATORY:

For each Laboratory

- List of Major Equipment/Facilities

Sl. No.	Name of the Course	Name of the Laboratory / Workshop	Total Area of lab/workshop (Sq. M.) (Appx.)	Major equipment
<b>Workshop:</b>		Heat Engines & Machine Tool Workshop	300	
		<b>TOTAL</b>	<b>300</b>	
<b>Laboratory:</b>		<b>Dept: Civil Engineering</b>		
		1. Highway Laboratory	115	
		2. Concrete & Structures Laboratory	300	

		3. Geotechnical Laboratory	85	
		4. Construction Management Laboratory	20	
		<b>TOTAL</b>	<b>520</b>	
	<b>M.Tech. in Manufacturing Technology</b>	<b>Dept: Mechanical Engineering</b>		
		1. Measurement Laboratory	20	
		2. Non-Conventional Machining	18	
		3. Robotics Laboratory	30	
		4. Automation Laboratory	20	
		5. CAAD Laboratory	90	
		6. CNC Machine Tools Laboratory	36	
		7. Welding Laboratory	18	
		8. Machine Tools and Heat Engines Laboratory	120	
		<b>TOTAL</b>	<b>352</b>	
	<b>M.Tech. in Multimedia &amp; Software Systems</b>	<b>Dept.: Computer Science &amp; Engineering</b>		
		1. Programming & Database Laboratory	70	
		2. Multimedia Engineering Laboratory	50	
		3. Linux Laboratory	120	
		<b>TOTAL</b>	<b>240</b>	
		<b>Dept.: Science</b>		
		1. Environment Pollution Monitoring Laboratory	300	
		2. Physics Laboratory	20	
		3. Photonics Laboratory	30	
		4. Optical Communication Laboratory	30	
		<b>TOTAL</b>	<b>380</b>	
	<b>M.Tech. in Mechatronics Engineering</b>	<b>Dept.: Electrical Engineering</b>		
		1. Digital Electronics Laboratory	20	
		2. Advance Control Laboratory	40	
		3. Basic Electrical Engg. and Network Laboratory	60	
		4. Measurement and Transducer Laboratory	40	
		5. Mechatronics Engg. Laboratory	60	
		6. Microprocessor and Communication Laboratory	20	
		7. Internet and Mechatronics Simulation Laboratory	60	

		8. Advanced Process Control Laboratory	40	
		<b>TOTAL</b>	<b>340</b>	
		<b>GRAND TOTAL</b>	<b>2060</b>	

➤ List of Experimental Setup

- *All the above mentioned laboratories are well equipped with state-of-art equipment suitable for various experimentation on the above programmes.*

**COMPUTING FACILITIES:**

Number and Configuration of Systems : P-IV / Latest Configuration : 60+20

- Number and Configuration of Systems : P-IV / Latest Configuration : 30+20
- Total number of systems connected by LAN : 30
- Total number of systems connected to WAN
- Internet bandwidth
- Major software packages available :

System Software - *Windows, Unix, Solaris, Linux*

Application Software - *Enclosed in Annexure - V*

- Special purpose facilities available

**WORKSHOP:**

- List of facilities available.

Games and Sports Facilities - *Available*

Extra Curriculum Activities - *Done*

Soft Skill Development Facilities - *Available*

Number of Classrooms and size of each - *1*

Number of Tutorial rooms and size of each - *1*

Number of laboratories and size of each - *3*

Number of drawing halls and size of each - *NA*

Number of Computer Centres with capacity of each - *Yes*

Central Examination Facility, Number of rooms and capacity of each - *NA*

Teaching Learning process - *Very Good*

Particulars	No. of rooms	Area available in the Institution (Sq.M)
Class Rooms	14	370
Tutorial Hall	3	120
Computer Centre	1	60



Library	1	100
Laboratories & workshops	22	2132

- Curricula and syllabi for each of the programmes as approved by the University - *Enclosed in Annexure - I, II & III*
- Academic Calendar of the University - *Enclosed in Annexure - VI*
- Academic Time Table - *As per West Bengal University of Technology Academic Calendar (See Annexure - VI)*
- Teaching Load of each Faculty - *Average 1½ papers per semester*
- Internal Continuous Evaluation System and place - *Regularly taken*
- Students' assessment of Faculty, System in place - *Occasional feedback mechanism is in place and systematic evaluation is under process.*

For each Post Graduate programme give the following:

- i. Title of the programme : *M. Tech. in Manufacturing Technology*
- ii. Curricula and Syllabi - *Enclosed in Annexure - III*
- iii. Faculty Profile - *Enclosed in Annexure - IIIA*

SI	NAME	DESIGNATION	SUBJECT TEACHING
1.	Dr. S. Ray	Professor	Operations Research (MTI 112), Metal Cutting & Machine Tools (MTI 102), Materials Handling System (MTI 205), Automation (partly) (MTI 203).
2.	Dr. S. Mandal	Professor	Robotics (MTI 104), Quality & Reliability Engineering (MTI 203), Automation (partly) (MTI 203)
3.	Dr. D. Bose	Professor	Welding Technology (partly) (MTI 104), Quality & Reliability Engineering (MTI 203), Non-conventional Production Processes (partly) (MTI 204), Fluid Control System (MTI - 107)
4.	Mr. N. K. Mandal	Asst. Professor	Material Processing Technology (partly), (MTI 101), Non-conventional Production Processes (partly) (MTI 204), Flexible Manufacturing System and CIM (MTI 201).
5.	Dr. R. Srinivasan	Professor	Human Resource Management (partly) (MTI 208)
6.	Dr. S. Chakraborty	Professor	Human Resource Management (partly) (MTI 208)
7.	Dr. (Mrs.)A. De	Professor	Material Science and Technology (partly) (MTI 103)
8.	Dr. S. N. Mandal	Asst. Professor	Material Science and Technology (partly) (MTI 103)

- i. Title of the programme : *M. Tech. in Multimedia & Software Systems*
- ii. Curricula and Syllabi - *Enclosed in Annexure - I*
- iii. Faculty Profile - *Enclosed in Annexure - IA*

SI	NAME	DESIGNATION	SUBJECT TEACHING
1.	Dr. S. Majumdar	Professor, CSE Dept.	<i>On-lien</i>
2.	Dr. R. Dasgupta	Professor & HOD, CSE Dept.	Computer Network & Web Tech. (MMS 104), Principles of Software Engineering (MMS 105), Design and Analysis of Algorithms (MMS 206), Topics on Databases (MMS 209)
3.	Dr. S. Roy	Asst. Professor, CSE Dept.	Data Structure & Algorithm (MMS 101), Object Oriented Software Design (MMS 201)
4.	Dr. R. K. Bera	Professor, HIT, Kol	Advanced Engineering Mathematics (MMS 106)
5.	Dr. B. K. Dutta	Professor, Chakdah College	Advanced Engineering Mathematics (MMS 106)
6.	Dr. N. Chaki	Lecturer, CU	Computer Architecture and Operating System (MMS 102), Principles of Software Engineering (MMS 105),
7.	Mr. S. Chowdhury	Lecturer, CU	Computer Network & Web Tech. (MMS 104)
8.	Mr. D. Dutta	Expert from Industry	Multimedia Engineering and Applications (MMS 103), Multimedia Design & E-learning Systems (MMS 204)
9.	Mr. D. Jana	Expert from Industry	Multimedia Engineering and Applications (MMS 103)
10.	Dr. B. B. Bhaumik	Professor, JU	Computer Architecture and Operating System (MMS 102)
11	Mr. Amlan Chakraborty	CU	Multimedia Engineering and Applications (MMS 103), Multimedia Design & E-learning Systems (MMS 204)

- i. Title of the programme : *M. Tech. in Mechatronics Engineering*
- ii. Curricula and Syllabi - *Enclosed in Annexure - II*
- iii. Faculty Profile - *Enclosed in Annexure - IIA*

SI	NAME	DESIGNATION	SUBJECT TEACHING
1	Dr. P. Sarkar	Professor, Electrical Engg. Dept.	Advanced Control Systems (ME101), Mechatronic Systems Design (ME201) Mechatronics Systems Simulation Laboratory (ME 291)
2	Dr. S. Chattopadhyay	Assistant Professor, Electrical Engg. Dept.	Sensors & Actuators (ME103), Sensors & Actuators Lab (ME191), Advanced Process Control Engg.(ME203) Mechatronics Laboratory (ME 292)
3	Dr. S. K. Mandal	Assistant Professor, Electrical Engg. Dept.	Signal Conditioning and DAS Lab (ME192), Advanced Microprocessors (ME202), Advanced Microprocessors Laboratory (ME 293)

SI	NAME	DESIGNATION	SUBJECT TEACHING
			Advanced Electrical Drives (ME 208)
4	Dr. S. Pal	Lecturer, Electrical Engg. Dept.	Mechatronics System Dynamics (ME102), Signal Conditioning and DAS (ME104), Advance Control Laboratory (ME193), Advanced Process Control Engg.(ME203) Mechatronics Laboratory (ME 292) Application of Mechatronic Systems (ME204)
5	Dr. S. Ray	Professor, Mechanical Engg. Dept.	Mechatronic Systems Design (ME201)
6	Dr. R. Dasgupta	Professor, CSE Dept.	Data Management & Software Systems (ME107)
7	Dr. D. Bose	Professor, Mechanical Engg. Dept.	Mechatronics System Dynamics (ME102), Mechatronic Systems Design (ME201)
8	Dr. S. Mandal	Professor, Mechanical Engg. Dept.	Mechatronics System Dynamics (ME102), Mechatronic Systems Design (ME201) Application of Mechatronic Systems (ME-204)
9	Shri N.K.Mandal	Asst. Professor, Mechanical Engg. Dept.	Application of Mechatronic Systems (ME-204)
10	Shri S. K. Naskar	Sr. Lecturer, Educational Planning & Management Dept.	Management Knowledge and Quality Management (ME-205)
11	Dr. S. Chakraborty	Professor, EDPM	Industrial Economics & Management (ME-206)
12	Dr. S. N. Mandal	Asst. Professor	Sensors and Actuators Lab(ME - 191)

➤ Brief profile of each faculty - Enclosed in Annexure - IA, IIA & IIIA

- Laboratory facilities exclusive to the PG programme

### Special Purpose

- Software, all design tools in case  
- Latest mentioned and soft development tools are available in the department.
- Academic Calendar and frame work
- Research focus  
- Multimedia, Database & Education Technology

- List of typical research projects.  
  
*- Modernisation of Computer Laboratory for Upgrading Training Facilities in Multimedia Engineering (under MODROB Scheme) (2003-2005)*
- Industry Linkage : *More than 150 Industry has been closely connected with NITTTR, Kolkata on various Industry-Institute-Interaction.*
- Publications (if any) out of research in last three years out of masters projects  
- NA
- Placement status - 100%
- Admission procedure  
  
*- Based on marks obtained in the Bachelor Level and structured interview.*
- Fee Structure : *Rs. 6000/- per semester*
- Hostel Facilities : *Available*
- Contact address of co-ordinator of the PG programme

Name: Dr. Subrata Chattopadhyay, Professor-in-Charge, PG Studies  
 Address: National Institute of Technical Teachers' Training & Research  
 Block - FC, Sector - III, Salt Lake City, Kolkata - 700 106  
 Telephone: 09433304180 (M), 033-2337-2332 (Direct)  
 E-mail: subrata0507@sify.com

**NOTE: Suppression and/or misrepresentation of information would attract appropriate penal action.**

# **Annexure - I**

**M.Tech. Programme**  
*In*  
**Multimedia and Software  
Systems**

***Affiliating University***

**West Bengal University of Technology**



**NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS' TRAINING AND  
RESEARCH**

***(Established by MHRD, Govt. of India)***

**BLOCK - FC, SECTOR - III, SALT LAKE CITY  
KOLKATA - 700 106**

# C O N T E N T S

1.	Rationale	...	1
2.	Objectives	...	1
3.	Entry Level	...	1
4.	Course Structure	...	2-3
5.	Detail Curriculum	...	4-21
	Semester - I	...	4-9
	Data Structure and Algorithms	...	4
	Computer Architecture and Operating System	...	5
	Multimedia Engineering and Applications	...	6
	Computer Network and Web Technology	...	7
	Principles of Software Engineering	...	8
	Advanced Engineering Mathematics	...	9
	(MTI105 of Manufacturing Tech)		
	Semester - II	...	10-21
	Object Oriented Software Design	...	10
	Software Project and Quality Management	...	11
	Database Management Systems	...	12
	Multimedia Design & E-learning Systems	...	13
	Elective I		
	Distributed Software System	...	14
	Design and Analysis of Algorithms	...	15
	Software Reuse and Requirement Engineering...		16
	Operations Research (MTI112 of Manufacturing Tech)		17
	Elective II		
	Topics on Databases	...	18
	Knowledge Engineering	...	19
	Robotics (MTI109 of Manufacturing Tech)	...	20
	Real Time and Embedded Systems	...	21

## **M.Tech. Programme in Multimedia and Software Systems**

### **Rationale :**

Due to the rapid development of computational capabilities, complex business and scientific activities are now being automated for higher reliability and efficiency and most modern software systems are augmented with various multimedia effects to make it more and more impressive. The emergence of computers with high speed processors, fast internal buses, high resolution graphic display, large optical memories at a reasonably low cost have provided the ability to capture, store and process high quality audio and video and embed them at different positions to make the final software product more attractive and effective. As a result, development of software now has become more a team effort rather than individual expertise and intelligence. To maintain the cohesiveness amongst the team members for maintaining the time target, cost optimisation etc., the issues of standardization, documentation, testing, quality control and many others had become imperative components in the design and development process of medium to large scale software solutions and products. As such, specialised knowledge and skill sets are required to learn about the current trends of multimedia technology and software systems development to be able to cater the need of the industry and academics. This postgraduate programme in Multimedia and Software Systems attempts to integrate various aspects of multimedia technology as well as software development process so that the passouts can deliver the requirements of both the industry and academics.

### **Objective :**

After successful completion of this M.Tech. Programme in Multimedia and Software Systems, students will be able to :

- Design complex software systems
- Develop complex software using DBMS
- Develop software using Object Oriented Technology
- Acquire, use and share knowledge using KMS
- Design and develop multimedia software including learning management system
- Assure quality, reliability in the design and development process of software
- Manage a complex software project

### **Entry Level :**

B.E./B.Tech. or equivalent from recognized University in the area of Computer Science & Engineering, IT, Electronics, Electrical or equivalent.



**COURSE STRUCTURE FOR M.TECH IN  
MULTIMEDIA AND SOFTWARE SYSTEMS  
(Under WBUT)**

***FIRST SEMESTER***

**A. THEORY**

SL. NO.	CODE	THEORY	CONTACTS (PERIODS/WEEK)				CREDITS
			L	T	P	TOTAL	
1.	MMS101	Data Structure and Algorithms	3			3	3
2.	MMS102	Computer Architecture and Operating System	3	1		4	4
3.	MMS103	Multimedia Engineering and Applications	3	1		4	4
4.	MMS104	Computer Network and Web Technology	3	1		4	4
5.	MMS105	Principles of Software Engineering	3	1		4	4
6.	MMS106	Advanced Engineering Mathematics (MTI105 of Manufacturing Tech)	3			3	3
<b>Total of Theory</b>			22				22

**B. PRACTICAL**

SL. NO.	CODE	PRACTICAL	CONTACTS (PERIODS/WEEK)				CREDITS
			L	T	P	TOTAL	
7.	MMS191	Programming Lab			3	3	2
8.	MMS192	Software Engineering Lab			3	3	2
9.	MMS193	Web Technology Lab			3	3	2
<b>Total of Practicals</b>						9	6
<b>Total of Semester</b>			31				28

***SECOND SEMESTER***

**A. THEORY**

SL. NO.	CODE	THEORY	CONTACTS (PERIODS/WEEK)				CREDITS
			L	T	P	TOTAL	
1.	MMS201	Object Oriented Software Design	3			3	3
2.	MMS202	Software Project and Quality Management	3	1		4	4
3.	MMS203	Database Management Systems	3			3	3
4.	MMS204	Multimedia Design & E-learning Systems	2	1		3	3
5.		Elective I	3	1		4	4
6.		Elective II	3			3	3
<b>Total of Theory</b>			20				20

**B. PRACTICAL**

SL. NO.	CODE	PRACTICALS	CONTACTS (PERIODS/WEEK)				CREDITS
			L	T	P	TOTAL	
7.	MMS291	Object Technology Lab			3	3	2
8.	MMS292	Multimedia Lab			3	3	2
9.	MMS293	Database Lab			3	3	2
<b>Total of Practicals</b>			9				6
<b>Total of Semester</b>			29				26

ELECTIVES : Two subjects to be chosen from the following two elective groups

**Elective I**

Code	Subject
MMS205	Distributed Software System
MMS206	Design and Analysis of Algorithms
MMS207	Software Reuse and Requirement Engineering
MMS208	Operations Research (MTI112 of Manufacturing Tech)

**Elective II**

Code	Subject
MMS209	Topics on Databases
MMS210	Knowledge Engineering
MMS211	Robotics (MTI109 of Manufacturing Tech)
MMS212	Real Time and Embedded Systems

**THIRD SEMESTER****A. SESSIONAL**

SL. NO.	CODE		CONTACTS (PERIODS/WEEK)				CREDITS
			L	T	P	TOTAL	
1.	MMS301	Seminar				3	2
2.	MMS302	Pre-submission Defence of Dissertation					4
3.	MMS303	Dissertation (Progress)				24	18
<b>Total of Semester</b>						27	24

**FOURTH SEMESTER****B. SESSIONAL**

SL. NO.	CODE		CONTACTS (PERIODS/WEEK)				CREDITS
			L	T	P	TOTAL	
1.	MMS401	Dissertation				24	18
2.	MMS402	Post-submission Defence of Dissertation					6
<b>Total of Semester</b>						24	24

## **Semester I**

Paper MMS101

Credit: 3

### **Data Structure and Algorithms (3-0-0)**

Abstract Data Types and their implementations

Linear Data Structures and Sequential Storage Representation:

Arrays, Stacks, Queues – their storage structures, operations, applications and limitations

Priority queue

Linear Data Structures and Linked Storage Representation:

Pointers, Linear lists (singly, circularly, doubly) – their storage structure, operations, applications and limitations

Nonlinear Data Structures:

Trees, Binary trees - definitions, concepts, storage representations, tree traversals, manipulations and applications, Quad tree and its derivatives and applications

Sort and Search algorithms – Bubble, Selection, Insertion, Merge, Quick sort, Binary search and Hashing

Binary search tree – search, insertion, deletion. AVL tree, 2-3 tree, B-tree, Binomial and Fibonacci heaps

### **BOOKS:**

1. Data Structures and Program Design: Robert L. Kruse, PHI
2. Fundamentals of Data Structures: Horowitz & Sahani, Galgotia Booksource
3. An Introduction to Data Structures with Applications: Tremblay & Sorenson, TMH
4. Introduction to Design & Analysis of Algorithms: Goodman & Hedetniemi, TMH
5. Introduction to Algorithms: Corman et.al., PHI
6. Fundamentals of Computer Algorithms: Horowitz et.al, Galgotia
7. The Design & Analysis of algorithm: Aho et.al. Pearson Edu
8. Fundamentals of Algorithms: Brassard & Bratley, PHI
9. Fundamentals of Algorithm: Knuth, Narosa

## **Semester I**

Paper MMS102

Credit: 4

### **Computer Architecture and Operating Systems (3-1-0)**

Brief introduction to Computer Architecture: Types of memory and memory management, processor management and I/O management, High Performance Computing

Operating Systems - I/O programming, Interrupt structure and processing, Multiple processors, Concurrent processes: Synchronization and Communication threads and processes.

Memory Management – Partition allocation, paged and demand paged allocation, segmented allocation

Processor Management – Scheduling, Multiple-Processor Scheduling  
File System, virtual machines, device drivers

Distributed OS – Basic concepts, message passing, remote procedure call, distributed shared memory architecture – consistency, replacement, thrashing, distributed file systems, security aspects.

Linux clusters, concepts of grid computing

### **BOOKS:**

1. *Computer Organization & Architecture: Stallings, PHI*
2. Computer Architecture & Organization: Hayes, MGH
3. Computer Organization & Design: Pal Chaudhuri, PHI
4. Operating Systems: Madnick & Donovan - MGH
5. Operating System Concepts: Silberchatz & Galvin -ADP
6. The Unix Programming Environment: Kernighan & Pike, PHI
7. Guide to Unix using Linux: Dent & Gaddis, VPH
8. Learning Red Hat Linux: McCarty, Oreilly
9. Computer Organization: Hamacher et. al. MGH
10. Scalable Parallel Computing: Hwang & Xu, MGH
11. Computer Architecture and Parallel Processing: Hwang & Briggs, MGH

## **Semester I**

**Paper MMS103**

**Credit: 4**

### **Multimedia Engineering and Applications (3-1-0)**

Introduction : Overview of multimedia, various types of multimedia information, characteristics, digital representation, hardware and software, accessories, hypertext and hypermedia

Multimedia Technology : Structure - components, platforms, Audio & video technology - basics, digitisation, file format, compression & decompression techniques, image and graphics, storage media, video streaming.

Animation : Definition, types, manipulation technique, rendering, file format, animation software

Graphics : Devices, display technology, pixel, raster, vector, resolution, transformation, solid modelling

Applications : Virtual reality, e-commerce & courseware engineering

#### **BOOKS :**

1. Multimedia - An Introduction : John Villamil - Casanova, Louis Molina - Prentice Hall, India
2. Multimedia Handbook : Jessica Keys, Mc Graw Hill Inc., 1994
3. Computer Graphics : Hearn D. & Baker M.P., Prentice Hall (EEE)
4. Multimedia Systems : Buford Koegel John F., Addison Wesley (Pearson Education Asia), 2000
5. Multimedia : Computing, Communications & Applications : Steinmetz Ralf & Nahrstedt Klara, Pearson Education Asia, 2001
6. Video and Image Processing in Multimedia Systems : Borko Furht, Kluwer Academic Publishers
7. Multimedia Systems and Techniques : Borko Furht, Kluwer Academic Publishers
8. Multimedia Systems : John F. Koegel Buford, ACM Press, Addison Wesley
9. Multimedia: Making it Work : Vaughan, Tay (1999), 4th ed. New Delhi, Tata McGraw Hill

## **Semester I**

Paper MMS104

Credit: 4

### **Computer Network and Web Technology (3-1-0)**

Data Communication and networking – brief overview, Network Architecture & Protocols, Concepts of layered architecture and role of different layers of OSI & TCP/IP reference models. IP addressing scheme

Routing and Routing algorithms, Congestion control, connection management, flow control, TCP

Internetworking – Bridge, Router, Gateway

Gateway routing Protocols, Domain name system, e-mail, WWW, URL, HTTP, HTML, XML

ISDN, Fiber Optic Communication, ATM

Cryptography and Data Security, public key encryption, firewall, network management

Mobile & Wireless Networks – Wireless systems, Infrared systems, Cellular systems – size and shape of cells, Cell capacity, cell demand, cell splitting, Channel Utilization – multiplexing: TDMA, CDMA, data compression.

GSM, Wireless LAN, Bluetooth

### **BOOKS:**

1. Computer Network: Tanenbaum, PHI
2. Data Communication & Computer Networks: Stallings, PHI
3. Computer Networks and Internets: Comer, PH
4. Building Internet Firewalls: Zwicky et al, Oreilly
5. Internetworking with TCP/IP: Comer & Stevens, Vol. I, II & III, PHI
6. TCP/IP Illustrated: Stevens, Vol. I, II & III, Addison Wesley
7. Mobile and Wireless Network: Black, PH

## **Semester I**

Paper MMS105

Credit: 3

### **Principles of Software Engineering (3-0-0)**

Importance of Software Engineering; Life Cycle models, Waterfall Model, Prototyping Model, Spiral Model, RAD

Requirement Analysis – Functional Modeling and Data flow, Data Modeling, Structured Analysis, Logical & Physical DFDs, ERD, Data Dictionary

Design Process – Transform and Transaction Analysis, Structure Chart, Modularity, Jackson Structured Programming (JSP) & System Development (JSD)

Software Project Planning – Software Metric, Cost Estimation – COCOMO Model

Software Quality Assurance – White Box & Black Box Testing, Test Case Design, Unit Testing, Integration Testing, Verification & validation of Software, Version Management

### **BOOKS:**

1. Software Engineering Beginners Approach: Pressman, TMH
2. Software Engineering: Jalote, Narosa
3. Fundamentals of Software Engineering - Ghezzi et al, PHI
4. Software Engineering - Sommerville, Addison-Wesley
5. Software Engineering with Abstractions, Berzins & Luqi, Addison-Wesley
6. Software Engineering: Aggarwal & Singh, New Age
7. Software Engineering Concepts: Fairley, MGH

## **Semester I**

Paper MMS106

Credit: 3

### **Advanced Engineering Mathematics (3-0-0)**

Matrices: Linear transformation, Matrix operation; Characteristic equation of a matrix, Eigen values and Eigen Vectors, Cayley-Hamilton theorem, Diagonalization of a square matrix, solution of simultaneous linear and normal equations, Eigen value Problem of Real symmetric matrix applications

Numerical Methods: Interpolation of Polynomials (Equal & Unequal Intervals), Curve fittings, Error Analysis, Solution of system of linear equation by Gauss-Seidel iterative method, Solution of Non-linear equation by Newton Rapson method, Numerical Integration by Gauss-qadrature, Solution by ordinary differential equation by Rayleigh-Ritz and Galerkin method, Monte Carlo Simulation, Applications

Statistics: Measures of Central Tendency and dispersion, Probability and Probability Distributions, Correlation and Regression. Testing of hypothesis, analysis of Variance. Statistical quality Control, Applications

Numerical Solution of Differential Equations (ODE & PDE)

Taylor's series method, Runge-Kutta method (Fourth order and above), Raleigh Ritz method, Euler-Lagrange method

#### **BOOKS:**

1. Advanced Engineering Mathematics: Kreyszig, John Wiley
2. Advanced engineering Mathematics: Grossman & Derrick, Harper & Roy



## **Semester II**

Paper MMS201

Credit: 3

### **Object Oriented Software Design (3-0-0)**

Object Oriented Modeling – Life Cycle, abstraction, encapsulation, modularity, inheritance, polymorphism, composition, aggregation.

Use cases, classification and identification of objects.

UML Notation: Class diagram, Object diagram, Sequence diagram, Collaboration diagram, Activity diagram, packages, State Transition diagram, UML model, Meta model

Object oriented quality assurance, metrics

Case Studies

### **BOOKS:**

1. Object Oriented Programming: Balaguruswamy, TMH
2. Software Engineering: Pressman, PHI
3. Object Oriented Modeling & Design: Rumbaugh et.al. PHI
4. A first course on Database System: Ullman & Widom, PH
5. Inside the Object Model: Papert, Sigs Book

## **Semester II**

**Paper MMS202**

**Credit: 4**

### **XVI. Software Project and Quality Management (3-1-0)**

Software Project Management - Project Management Techniques and their applications in Software projects. Software Development Plan – associated tasks, milestones and deliverables, project scheduling – tasks, dependencies and conflict resolution. Resource management and allocation, cost estimation – COCOMO model and its derivatives, Risk assessment and its impact, software tools for software project management, configuration management, software risk and reliability, software reuse – impact of object-oriented design and programming.

Requirements Engineering – Requirements analysis and specifications, requirement specification documents, validation process of requirements specifications, use of formal methods, interviewing process and feedback with the customer

Software Quality Management – Software Testing and Verification – white and black box testing, unit testing, integration testing, system testing, test plans, Mathematical methods for software verification, ISO 9001, Capability Maturity Model

### **BOOKS:**

1. Software Engineering Beginners Approach: Pressman, TMH
2. Software Engineering: Jalote, Narosa
3. Fundamentals of Software Engineering - Ghezzi et al, PHI
4. Software Engineering - Sommerville, Addison-Wesley
5. Software Engineering with Abstractions, Berzins & Luqi, Addison-Wesley
6. Software Engineering: Aggarwal & Singh, New Age
7. Software Engineering Concepts: Fairley, MGH

## **Semester II**

Paper MMS203

Credit: 4

### **Database Management Systems (3-1-0)**

Relational Model – Relational Algebra, Tuple and Domain Relational Calculus

Database Design Techniques - Functional Dependency, Normalisation

File and System structure: file organization, indexing and hashing

Query Optimization: Query processing, cost estimation

Transactions Management, dead lock detection and recovery, nested transaction,

Concurrency Control, Recovery, Integrity & Security

Data mining, Data warehousing

#### **BOOKS:**

1. Fundamentals of Database System: Elmasri & Navathe, Addison-Wesley
2. An Introduction to Database Systems: Date, Addison-Wesley
3. Principles of Database Systems: Ullman, Galgotia
4. Database Systems Concepts: Korth et. al, MGH
5. A first Course on Database System: Ullman & Widom, PH
6. Introduction to Data Compression: sayood, Elsevier

## **Semester II**

Paper MMS204

Credit: 3

### **Multimedia Design & E-learning Systems (2-1-0)**

Life Cycles : Concept and requirement analysis, design, creating scripts, flow charts and story board, development of building blocks, integration, testing & evaluation, publishing.

Human Computer Interaction : HCI design, cognitive aspect in multimedia presentation, methodology of dialog design.

Development Tools : Authoring tools and approaches, page based, icon based and time based tools, comparative analysis and selection.

E-learning : Characteristics, opportunities, contemporary trends and practices

LMS : Introduction, features, selection, limitation, SCORM standards

Development Models : introduction, models of course development, types of e-learning courses, wrap around model, integrated model.

Pedagogical Issues : Distributed, problem solving, CSCL, goal based, case based learning

Tools : Various LMS tools, comparative analysis

Evaluating e-learning system : costs, access, quality and speed

Research opportunities in e-learning

### **BOOKS:**

1. Computer Mediated Communication: Rapoport, M., John Wiley & Sons, Inc, New York
2. The Key to Teaching & Learning Online: Salmon & E. Moderating, Kogan Page.
3. Implementing Computer Supported Cooperative Learning : McConnell D., London, UK, Kogan Page
4. Multimedia Communication Systems: Techniques, Standards, and Networks : K. R. Rao, Zoran S. Bojkovic, Dragorad A. Milovanovic, D. A. Milovanovic, Prentice Hall
5. Distributed Multimedia: Palmer W. Agnew and Anne S. Kellerman, ACM Press, Addison Wesley
6. Multimedia Interface Design: Meera M. Blattner and Roger B. Dannenberg, ACM Press, Addison Wesley
7. Digital Multimedia, Chichester: Chapman, Nigel and Chapman, Jenny (2000), John Wiley
8. Practical Guidelines for creating Instructional Multimedia Applications: Fenrich, Peter (1997), Fort Worth, Dryden Press
9. A Developers' handbook to Interactive Multimedia; A practical guide for educational application: Phillips, Rob (1997), London: Kogan Page
10. Multimedia for Learning: Methods and Development : Alessi, S. M., & Trollips, S. R. (2001), (3rd ed.). Boston, MA: Allyn & Bacon.

## **Semester II**

Paper MMS205

Credit: 4

### **Elective I (3-1-0)**

#### **Distributed Software Systems**

Distributed Systems – Client Server, Proxy Server, Mobile System

Distributed Applications – URL, HTTP, WWW, Web Programming – HTML, DHTML, XML, ASP, Java, Java Servlet, Java Server Page

Distributed Object Computing – CORBA, COM, DCOM

#### **BOOKS:**

1. Internet and Java Programming: Krisnamoorthy & Prabhu, New Age
2. Distributed Algorithms: Lynch, Morgan Kaufmann
3. XML Step by Step: Young, PHI
4. Developing XML Solutions: Sturm, PHI
5. ASP in a Nutshell: Weissinger, Oreilly
6. Webmaster in a Nutshell: Spainhour & Eckstein, Oreilly
7. Java How to Program: Deitel & Deitel, PH

## **Semester II**

Paper MMS206

Credit: 4

### **Elective I (3-1-0)**

#### **Design and Analysis of Algorithms**

Design methods – Divide and Conquer, Greedy method, Dynamic programming, Back tracking, Branch and Bound, Approximation and Probabilistic Algorithms

Graph Algorithms – Breath-first, Depth-first search, Topological sort, Minimum Spanning Trees, Shortest path Algorithms – Bellman-Ford Algorithm, Dijkstra's Algorithm

Matrix Operations – Strassen's Algorithm for matrix manipulation, Matrix inversion

Linear Programming – Simplex algorithm, Duality

String Matching algorithms, Convex hull, Traveling Salesman Problem, Data compression techniques – JPEG, MPEG

NP- Completeness and reducibility, proofs and NP-complete problems

#### **BOOKS:**

1. Data Structures and Program Design: Robert L. Kruse, PHI
2. Fundamentals of Data Structures: Horowitz & Sahani, Galgotia Booksources
3. An Introduction to Data Structures with Applications: Tremblay & Sorenson, TMH
4. Introduction to Design & Analysis of Algorithms: Goodman & Hedetniemi, TMH
5. Introduction to Algorithms: Corman et.al., PHI
6. Fundamentals of Computer Algorithms: Horowitz et.al, Galgotia
7. The Design & Analysis of algorithm: Aho et.al. Pearson Edu
8. Fundamentals of Algorithms: Brassard & Bratley, PHI
9. Fundamentals of Algorithm: Knuth, Narosa

## **Semester II**

Paper MMS207

Credit: 4

### **Elective I (3-1-0)**

#### **Software Reuse and Requirement Engineering**

Impact of Object-Based and Object-Oriented design and programming, architecture centric, domain specific, library based reuse methodologies - influence on reliability, efficiency and cost.

Requirement analysis and specifications - requirement definitions and requirement specification documents, types of requirement, validation process, software prototyping, use of formal methods.

#### **BOOKS:**

1. Software Engineering Beginners Approach: Pressman, TMH
2. Software Engineering: Jalote, Narosa
3. Fundamentals of Software Engineering - Ghezzi et al, PHI
4. Software Engineering - Sommerville, Addison-Wesley
5. Software Engineering with Abstractions, Berzins & Luqi, Addison-Wesley
6. Software Engineering: Aggarwal & Singh, New Age
7. Software Engineering Concepts: Fairley, MGH

## **Semester II**

Paper MMS208

Credit: 4

### **Elective I (3-1-0)**

#### **Operations Research**

Introduction to Operations Research (OR); History of OR; Principles of modelling, Impact of OR; Implementation of OR projects, Different OR problems

Linear Programming (LP): Introduction, LP model, problem formulation, examples and case studies, limitations of LP, geometrical interpretation, essence of simplex method, algebra of simplex method, simplex procedure, degeneracy and other complications, dual simplex method, sensitivity analysis, computer implementation

Transportation problem, assignment problem, sequencing problem

Network analysis: shortest-route problem, The minimal spanning tree problem, the maximum flow problem

Project scheduling: Critical Path method (CPM), Network construction and determination of critical path, Crashing, Resource smoothing

Non Linear Programming: Graphical Illustrations; Integer Linear Programming - applications, Graphical solution, branch and bound solution, Dynamic programming

Inventory Models: EOQ model, Sensitivity analysis in EOQ model, economic lot size model, EOQ with planned shortage, quantity discounts for EOQ model

Waiting Line Models: Structure, single channel waiting line model, Multiple channel waiting line models, economic analysis of waiting lines

Forecasting Techniques

#### **BOOKS:**

1. Introduction to Operations Research: Hiller & Lieberman, MGH
2. Operations Research Principles and Practice: Avindran et al, John Wiley
3. Fundamentals of Operations Research: Ackoff & Sasieni, West Pub.
4. An Introduction to Management Science: Anderson et al, West Pub.
5. Operations Research An Introduction: Taha, PHI



## **Elective II (3-0-0)**

### **Paper MMS209**

**Credit: 3**

#### **Topics on Databases**

Review on - Relational Algebra & Relational Calculus, Query optimisation, Transaction management and concurrency control, physical data organisation

Distributed Database - basic concepts, fragmentation, distributed database design, distributed transaction management and concurrency control, timestamp

Spatial Database - Basic concepts, storage and retrieval of spatial and non-spatial data, quad tree, address square, GIS queries

Statistical database - elementary operations, security in statistical database, linear queries, limits on the structure of queries

Temporal database - updating of temporal data, temporal query, real-time database

#### **BOOKS:**

1. Fundamentals of Database System: Elmasri & Navathe, Addison-Wesley
2. An Introduction to Database Systems: Date, Addison-Wesley
3. Principles of Database Systems: Ullman, Galgotia
4. Database Systems Concepts: Korth et. al, MGH
5. A first Course on Database System: Ullman & Widom, PH
6. Introduction to Data Compression: sayood, Elsevier
7. Introduction to Geographic Information System: Chang, TMH
8. Distributed Databases, Principles & Systems: Ceri & Pelagatti, MCG
9. Modern Database Systems: Ed. Won Kim, Addison Wesley

## **Elective II (3-0-0)**

### **Paper MMS210**

**Credit: 3**

#### **Knowledge Engineering**

Overview : KE cycle, knowledge economy and society, organizational knowledge, individual knowledge, explicit knowledge, tacit knowledge, evolution of knowledge management, development applications of knowledge engineering.

KMS : Create, capture, organize, access and use of knowledge, spiral of knowledge management

Knowledge Networks : Knowledge networking, distributed heterogeneous knowledge networks, knowledge creating organization, mapping and measuring knowledge.

Web-Based Systems : Building knowledge site, knowledge modelling, tools for web based knowledge networking system

Case Studies : IBM, UNESCO, SEARCA K-Net

#### **BOOKS :**

1. Information Technology for Knowledge mangement: Borghoff, U. and R. Pareschi, 1997, Journal of Universal Computer Science, Vol.3/No. 8.
2. Enterprise Knowledge Management Modelling and Distributed Knowledge Management Systems: Firestone, Joseph M., 1999.
3. Managing Organizational Knowledge: Perspectives on Business Innovation, Ernst and Young, Issue I.
4. The Fifth Discipline: The Art and Practice of the Learning Organization : Senge, Peter M. 1994, Doubleday/Currency.
5. Electronic Performance Support Systems: Show Me the Knowledge : Wells, Jonathan and Christopher Pravetz, Pricewaterhouse Coopers, 1998.

## **Elective II (3-0-0)**

### **Paper MMS211**

**Credit: 3**

#### **Robotics**

Robot Geometry: Degrees of freedom, Robot classification based on physical configuration, classification based on control system, Work Envelope, Mobile Robots

Robot Drives: Hydraulic, Pneumatic, Electric, mechanical Gear and Cam

Motion Control: Axis limit, Point-to-point, contouring, Link Tracking

Robot Tooling: Grippers, Appliances, Part-complaint tooling

Programming: VAL, AML/2, ARMBASIC

Sensing Capability: Gripper pressure sensor, Electro-optic force sensor, Optical sensor, Robot Vision System, Tactile Sensor

Performance Specification: Payload, Repeatability, Speed

Robot Utilization and Justification: labour Resistance, Economic Justification

Robot Motion Analysis: Forward Kinematics Transformation, Backward Kinematics Transformation, Basic Homogeneous Transformation

Robot applications: Welding, Spray painting, assembly, Machine Loading, special applications

#### **BOOKS:**

1. Robotics for Engineers: Koren, MCG
2. Robots and Manufacturing Automation: Asfahl, John Wiley
3. Robotics Technology and flexible Automation: Deb, TMH
4. Robotic Engineering, An Integrated Approach: Klafter et al, PHI

## **Elective II (3-0-0)**

### **Paper MMS212**

**Credit: 3**

#### **Real Time and Embedded Systems**

Real time and embedded real time systems, hardware and software architecture of real time systems, types of memory and memory management, interrupt, interrupt latency and interrupt service routine

Real Time Operating System (RTOS) – Board Support Package (BSP), its role in embedded system, Task management, Race Conditions, Priority Inversion, ISR and Scheduling, Inter Task Communication, Timers

Requirements Engineering – Requirements Engineering Process and its characteristics, Architecture and Design of Embedded System

Real Time Software Design – Design Methodologies and models, Life Cycles

#### **BOOKS:**

1. An Introduction to the Design of Small-scale embedded System: Wilmshurst, Palgrave
2. Embedded Real time Systems Programming: Iyer & Gupta, TMH

# **Annexure - IA**

**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : : Dr. Shyamal Majumdar  
(on lien and the post is advertised)
2. Date of Birth : : 08.04.1956
3. Educational Qualification : : Ph.D.
4. Work Experience
  - Teaching : : 21 years
  - Research : : 14 years
  - Industry : : 4 years
  - Others
5. Area of Specializations : : Multimedia, E-learning, Knowledge Management
6. **Subjects teaching at Under Graduate Level**  
**Post Graduate Level** : : Multimedia, Software Engineering, E-Learning, Knowledge Management
7. Research guidance : :
 

<b>No of papers published in</b>		
Masters's	National journals	4
Ph.D.	International Journals	2
-	Conference	
	International :	50
	National :	6
8. Projects Carried out : : Thrust Area - 1  
MODROB - 1
9. Patents : : No
10. Technology Transfer : : No
11. Research Publications : : Technical Reports - 7, Paper Published - 60
12. No. of Books published with details : :
 

Book Edited - 3

  1. Re-engineering TET, CPSC
  2. Transforming TET Institutions the CPSC way, CPSC
  3. Regional Guideline for Teacher Development for Pedagogy - ICT Integration, UNESCO



*( Signature )*

**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE  
AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Dr. Ranjan Dasgupta

2. Date of Birth : 31.07.1960

3. Educational Qualification : Ph.D.



4. Work Experience

- Teaching : 20 years
- Research : 20 years
- Industry : 5 years
- Others

( Signature )

5. Area of Specializations : Database, Parallel & Distributed Computing, GIS,  
Web based Education

6. **Subjects teaching at Under Graduate Level**

**Post Graduate Level :**

Networking, Software Engineering

7. Research guidance :

**No of papers published in**

Masters's	12 (on going)	National journals	
Ph.D.	03 (on going)	International Journals	2
	-	Conference	
		International	23
		National	5

8. Projects Carried out : 1

9. Patents : No

10. Technology Transfer : No

11. Research Publications : Articles - 30

12. No. of Books published with details :

**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Dr. Samir Roy

2. Date of Birth : 07.08.1963

3. Educational Qualification : Ph.D.



4. Work Experience

*(Signature)*

- Teaching : 17 years

- Research : 18 years

- Industry :

- Others

5. Area of Specializations : Computer Science & Engineering

6. **Subjects teaching at Under Graduate Level**

**Post Graduate Level :**

Data Structure & Algorithms, Object Oriented Software Design, Design & Analysis of Algorithm, Programming Lab, Object Technology Lab

7. Research guidance :

**No of papers published in**

Masters's	14 (on going)	National journals	2
Ph.D.	1 (submitted)	International Journals	5
	-	Conference	25

8. Projects Carried out : 1

9. Patents :

10. Technology Transfer :

11. Research Publications : 32 Articles + 2 National + 4 International + 20 Conference

12. No. of Books published with details :



**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE  
AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Shri Rajeev Chatterjee  
(Study leave for M. Tech.)

2. Date of Birth : 05.02.1976

3. Educational Qualification : B.E. (Computer Science)



4. Work Experience

- Teaching : 10 yrs.
- Research : 3 yrs.
- Industry : Nil
- Others

*(Signature)*

5. Area of Specializations : Computer Network

6. **Subjects teaching at Under Graduate Level**

**Post Graduate Level :**

7. Research guidance :

**No of papers published in**

Masters's

National journals

Ph.D.

International Journals

-

Conference

3

8. Projects Carried out : Nil

9. Patents : Nil

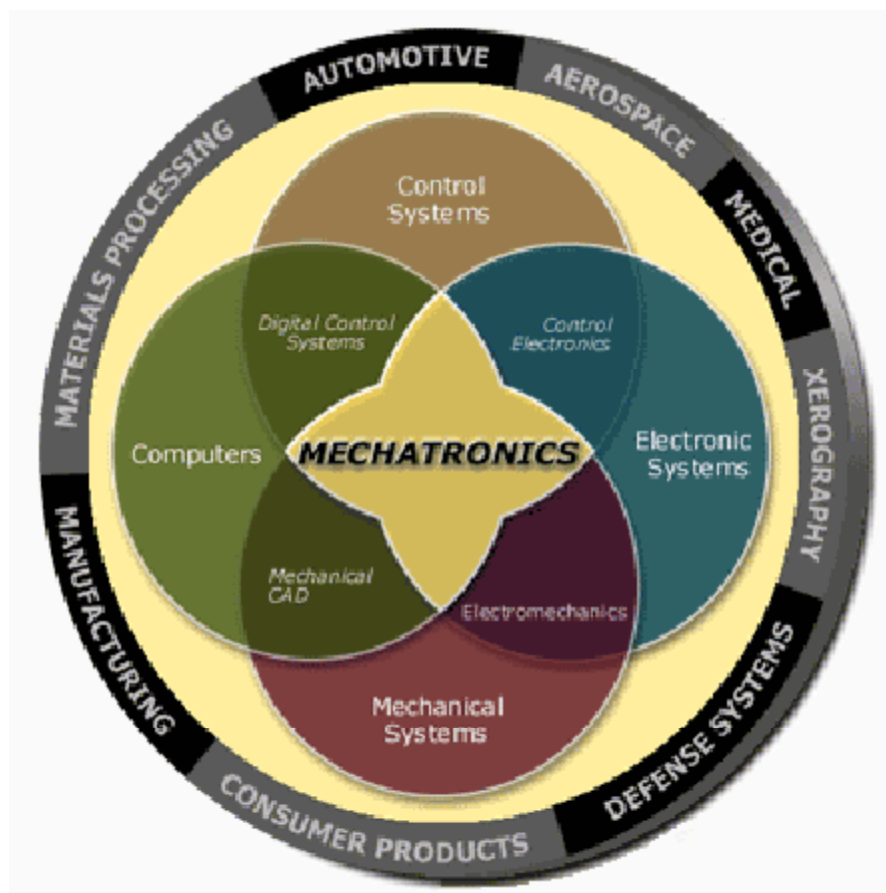
10. Technology Transfer : Nil

11. Research Publications :

12. No. of Books published with details :

## **Annexure - II**

# 4 SEMESTERS M. TECH COURSE ON MECHATRONICS ENGINEERING



Electrical Engineering Department

***NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND RESEARCH, KOLKATA***

BLOCK – FC, SECTOR – III, SALT LAKE CITY, KOLKATA – 700 106

# Mechatronics Engineering

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## INTRODUCTION

Mechatronics is the combination of precision mechanical engineering, electronics, control engineering and computer science applied to intelligent control of machines and processes, a multidisciplinary technology behind so called smart components, systems and manufacturing facilities, a design philosophy, an integrated approach to engineering design. Characteristic of Mechatronics devices and systems is their in-built intelligence, improved performance and greater flexibility.

The true mechatronics engineer is that rare individual who has a genuine interest and ability across a wide range of technologies, and who takes delight in working across disciplinary boundaries to identify and use the particular blend of technologies which will provide the most economic, elegant, and appropriate solution to the problem in hand. Furthermore, he/she is a high communicator who has the knack of being able to enthuse others about technologies outside their own, and hence to break down built-in resistance to the use of alternative approaches.

To evaluate concepts generated during the design process, without building and testing each one, the mechatronics engineer must be skilled in the modeling, analysis, and control of dynamic systems and understand the key issues in hardware implementation. This course strives to develop in each student a balance between these. This course studies in depth the key areas of technology on which successful mechatronic designs are based and thus lays the foundation for the students to become true mechatronic engineers.

## OBJECTIVES

After completion of the course the pass out will be able to:

- Understand the importance of the integration of modeling and controls in the design of mechatronic systems
- Understand the dynamic system investigation process and be able to apply it to a variety of dynamic physical systems.
- Understand the importance of physical and mathematical modeling (both from first principles and using system identification experimental techniques) in mechatronic system design and be able to model and analyze mechanical, electrical, electromechanical, fluid, thermal, and multidisciplinary systems and identify the analogies among the various physical systems.
- Understand and be able to model various nonlinear and parasitic effects in real dynamic systems: backlash, time delay, saturation, Coulomb friction, unmodeled resonance.
- Be able to develop a hierarchy of physical models for a dynamic system, from a truth model to a design model, and understand the appropriate use of this hierarchy of models.
- Become proficient in the use of MatLab/Simulink to model and analyze nonlinear and linear mechatronic systems.

- Understand the key elements of a measurement system and the basic performance specifications and models of a variety of analog and digital mechatronic sensors.
- Understand the characteristics and models of various electromechanical actuators (brushed dc motor, brushless dc motor, and stepper motor) and hydraulic and pneumatic actuators.
- Understand analog and digital circuits and components and semiconductor electronics as they apply to mechatronic systems.
- Understand stability (absolute and relative) and performance (command following, disturbance rejection, robustness) as it applies to feedback control systems.
- Understand and be able to apply, with the use of the MatLab Controls Toolbox, various control system design techniques: open-loop feed-forward control, classical feedback control (root-locus and frequency response), and state-space control.
- Understand industrial motion control: types of controllers (PID-type control modes and variations), tuning of controllers, and position/velocity control loops with encoders/resolvers.
- Understand the digital implementation of control and basic digital control design techniques.
- Become proficient in the use of Mat Lab / Simulink/ Controls Toolbox to design and analyze analog controllers and verify their digital implementation.
- Have an awareness of advanced control design techniques, e.g., cascade control, inferential control, model predictive control, adaptive control, fuzzy logic control, and multivariable control.
- Be able to use a micro controller as a mechatronic system component, i.e., understand programming and interfacing issues.
- Be able to apply all these skills to the design and building of a mechatronic system.

## **COURSE DESCRIPTION**

Mechatronics can be defined as a design philosophy which encourages engineers to integrate precision mechanical engineering, digital and analog electronics, control theory and computer engineering in the design of “intelligent” products, systems and processes rather than engineering each set or requirements separately. The advantages of the mechatronics approach to design are shorter design cycles, lower costs, and elegant solutions to design problems that can not easily be solved by staying within the bounds of the traditional engineering disciplines. With an underlying focus on integration, this course emphasizes the fundamental technologies on which contemporary mechatronic designs are based on

- Sensors and actuators,
- System dynamics and control,
- Analog and digital electronics,
- Micro controller technology,
- Interface electronics and
- Real-time programming.

A variety of existing divisional laboratory resources are used in the Mechatronics Engineering course. These resources include basic electronic test and measurement equipment (oscilloscope, DVM, power supply, function generator), micro controller, PLC, Robot and mechanical manufacturing equipment.

The laboratory sessions focus on small, hands-on interdisciplinary design projects in which small teams of students configure, design, and implement a succession of mechatronic

subsystems, leading to system integration in a final project. For example, as an introduction to digital design, students apply the fundamental principals of combinatorial and sequential logic to the design of a dedicated digital circuit to interface a quadrature incremental encoder to a micro controller. The design is implemented and tested using a programmable logic device and the associated software development tools. As part of the final design project, the interface circuit and encoder are integrated with a DC servomotor to construct a servomechanism which controls one axis of a simple machine tool.

## **COURSE STRUCTURE FOR M. TECH. IN MECHATRONICS ENGINEERING**

### **FIRST SEMISTER**

<b>A. THEORY</b>							
<b>Sl. No.</b>	<b>Code</b>	<b>Subjects</b>	<b>Contacts (Period / Week)</b>				<b>Credits</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>	
1.	ME101	Advanced Engineering Mathematics	3	-	-	3	3
2.	ME102	Mechatronic Systems Dynamics	3	-	-	3	3
3.	ME103	Sensors and Actuators	3	-	-	3	3
4.	ME104	Signal Conditioning and Data Acquisition Systems	3	-	-	3	3
5.	ME105	Advanced Control Systems	3		-	3	3
6.		Elective – I	3	-	-	3	3
Total of Theory						18	18

<b>B. LABORATORY / PRACTICAL</b>							
<b>Sl. No.</b>	<b>Code</b>	<b>Subjects</b>	<b>Contacts (Period / Week)</b>				<b>Credits</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>	
7.	ME191	Sensors and Actuators Lab	-	-	3	3	2
8.	ME192	Signal Conditioning and Data Acquisition Systems Lab	-	-	3	3	2
9.	ME193	Advanced Control Lab.	-	-	3	3	2
Total of Laboratory						9	6
Total of Semester						27	24

**Elective – I: One subject to be chosen from the following subjects.**

<b>Code</b>	<b>Subjects</b>
ME106	Simulation of Structure, field and flow
ME107	Data Management and Software Systems
ME108	Advanced Electrical Drives

## SECOND SEMESTER

A. THEORY							
Sl. No.	Code	Subjects	Contacts (Period / Week)				Credits
			L	T	P	Total	
1.	ME201	Mechatronic Systems Design	3	-	-	3	3
2.	ME202	Advanced Microprocessors	3	-	-	3	3
3.	ME203	Advanced Process Control Engg.	3	-	-	3	3
4.	ME204	Application of Mechatronic Systems	3	-	-	3	3
5.		Elective – II	3	-	-	3	3
6.		Elective – III	3	-	-	3	3
Total of Theory						18	18

B. LABORATORY / PRACTICAL							
Sl. No.	Code	Subjects	Contacts (Period / Week)				Credits
			L	T	P	Total	
7.	ME291	Mechatronic Systems Simulation Lab.	-	-	3	3	2
8.	ME292	Mechatronics Lab.	-	-	3	3	2
9.	ME293	Advanced Microprocessors Lab.			3	3	2
Total of Laboratory						9	6
Total of Semester						27	24

**Elective – II: One subject to be chosen from the following subjects.**

<b>Code</b>	<b>Subjects</b>
ME205	Management Know – How and Quality Management
ME206	Industrial Economics and Management

**Elective – III: One subject to be chosen from the following subjects.**

<b>Code</b>	<b>Subjects</b>
ME207	Micro Mechatronic Systems
ME208	Wireless Communications
ME209	Neuro-Fuzzy Control Systems
ME210	Real Time and Embedded Systems

### THIRD SEMESTER

A. THEORY							
Sl. No.	Code	Subjects	Contacts (Period / Week)				Credits
			L	T	P	Total	
1.	ME301	Seminar	-	-	-	3	2
2.	ME302	Pre-submission Defense of Dissertation	-	-	-		4
3.	ME303	Dissertation (Progress)	-	-	-	24	18
Total of Semester						27	24

### FOURTH SEMESTER

B. THEORY							
Sl. No.	Code	Subjects	Contacts (Period / Week)				Credits
			L	T	P	Total	
1.	ME401	Dissertation (Completion)	-	-	-	24	18
2.	ME402	Post-submission Defense of Dissertation	-	-	-	-	6
Total of Semester						24	24

### POSSIBLE PROJECTS IN MECHATRONICS

Several mechatronic system case studies with accompanying hardware will be used throughout the course. The purpose of these case studies is to help develop in each student a *balance* among: modeling, analysis, and control techniques; computer simulation and interpretation of results; key issues of hardware implementation; and comparison of simulations and experiments. The *defining quality* of a mechatronics engineer is the ability to work competently in these four areas. The mechatronic system case studies available are:

- Thermal System Closed-Loop Computer Temperature Control
- Pneumatic Servomechanism Closed-Loop Computer Position Control
- Stepper Motor Open-Loop and Closed-Loop Computer Motion Control
- Brushed DC Motor Closed-Loop, Analog and Digital, Position and Velocity Control
- Brushless DC Motor Closed-Loop Velocity Control
- DC Motor / MR Fluid Brake Closed-Loop Computer, Velocity and Position Control
- Magnetic Levitation System
- Robot Control and Programming

Lab sessions will be scheduled during the semester, during which time the students will be able to investigate, both in hardware and simulation, the dynamic behavior of some of these systems.



## **COMPUTER USAGE**

MatLab with Simulink and the Control System Toolbox will be used extensively throughout the course. A tutorial “MatLab for Mechatronics Applications” will be made available at the beginning of the semester.

## **ENTRY - LEVEL**

Graduate in Electrical, Electronics, Electronics and Tele-communication, Instrumentation, Mechanical or equivalent engineering degree from recognized engineering Institutes and AICTE approved Engineering Colleges.

## **CAREER OPPORTUNITIES**

Mechatronics engineers have excellent employment prospects as the demand for qualified professionals with multidisciplinary skills combining knowledge of mechanical and electronic systems has increased in recent years. Professional mechatronics engineers are typically found in positions where they are responsible for integrated computer controlled mechanical and electrical systems such as those found in the manufacturing and mining industries. They are also employed in electrical plants and companies where automation and process control is required. Career opportunities in this fast-changing field exist in both private industry and publicly funded enterprises.

# SYLLABUS FOR MECHATRONICS ENGINEERING

## FIRST SEMISTER

### ME 101 ADVANCED ENGINEERING MATHEMATICS

#### *Ordinary Differential Equation*

8L

Introduction, Validity of series solution of an Ordinary Differential Equation, General method to solve equation of the type:  $P_0(x) y'' + P_1(x) y' + P_2(x)y = 0$ , Bessel's equation, Properties of Bessel function, Recurrence formula for Bessel's function of 1<sup>st</sup> kind  $J_n(K)$ , Legendre equation, Legendre function, Recurrence formula for Legendre function  $P_n(x)$ , Orthogonality relation.

#### **Partial differential equation and its applications**

**8L**

Introduction, Linear and nonlinear Partial differential equation of 1<sup>st</sup> order, Homogeneous Linear Partial differential equation of 2<sup>nd</sup> order with constant and variable coefficients, Separation of variables, Formulation and solution of wave equation, One dimensional heat flow and wave equations and solution, Two dimensional heat flow equation and wave equations and solution.

#### *Difference Equation*

6L

Introduction, Formulation of difference equation, Method of solution of linear homogeneous and non-homogeneous difference equations, generating functions and difference equations.

#### *Complex Variable*

8L

Introduction, Analytic function, Harmonic functions, Definite Integral, Cauchy's Theorem, Cauchy's Integral formula, Taylor's and Laurents series, Zeroes of an Analytic function, Singularities, Calculus of residues, Cauchy's residue theorem, Evaluation of Definite Integrals.

#### *Fourier Series*

6L

Introduction, Periodic functions, Fourier Series, Half range series, Complex form of Fourier Series, Functions having Arbitrary periods, Parseval's Theorem.

#### *Fourier Transform*

6L

Introduction, Fourier transformer, Prospects of Fourier Transform, Evaluation of Fourier Transform Issue, Problems of Fourier transforms.

#### *Laplace Transform*

6L

Introduction, Laplace Transform, Inverse Laplace Transform, Laplace Transform of Periodic functions, Solutions of Differential Equations using LT.

### ME 102

### MECHATRONIC SYSTEMS DYNAMICS

#### *Mechanical Systems*

10L

Introduction to various systems of units, mathematical modeling of mechanical systems, Newton's laws, moment of criteria, forced response and natural response, rotational systems, spring mass system, free vibration, spring mass damper system, mechanical systems with dry friction, work energy and power, passive elements and active elements an energy method for deriving equations of motion, energy and power transformers.

### *Electrical Systems*

10L

Mathematical modeling of electrical systems, mathematical modeling of electrical circuit, transfer function representation of dynamic systems, mathematical modeling of an electro mechanical system armature control of dc servo motors, mathematical modeling of operational amplifier systems, operational amplifier complex impedances, Analogous systems mechanical electrical analogies, force voltage analogy, force current analogy.

### **Fluid and Thermal systems**

**14**

**L**

Mathematical modeling of liquid level system: Resistance and capacitance of liquid level systems with interaction. Mathematical modeling of pneumatic systems: Resistance and capacitance of pneumatic systems, mathematical modeling of a pneumatic systems, liberalization of non-linear systems. Mathematical modeling of hydraulic systems: Hydraulic circuits, hydraulic servo-meter and mathematical model of hydraulic servo motor dashpots. Mathematical modeling of thermal systems: Thermal resistance and thermal capacitance mathematical modeling of thermal systems.

### **System Models**

**14**

**L**

Linearity, rotational translational systems, electromechanical systems, hydraulic mechanical systems. Dynamic responses systems, Natural and force responses, transient and steady state response, the second order differential equation performance measures for second order systems, System transfer function 1<sup>st</sup> order systems, second order systems, systems in series, systems with feedback loops, effect of pole location on transient response MATLAB and SIMULINK.

## **ME 103**

### **SENSORS AND ACTUATORS**

#### **Principles of Sensors**

**5L**

Sensor classification. Characteristics and calibration of mechanical, electrical, optical, thermal, magnetic, chemical and biological sensors. Sensor reliability.

#### *Displacement sensors*

5L

Principles of variable resistance, variable inductance, variable reluctance, synchros and resolver, variable capacitance, Hall effect device, Digital displacement sensors.

#### *Force, Torque, tactile and Pressure sensor*

8L

Different types of load cells, Digital force transducer, Pressure transducer, Transmission type, Driving type and Absorption type Dynamometer, Tactile sensors using contact closure, magnetic, Piezoelectric, Photoelectric, capacitive and ultrasonic methods, Manometer, elastic elements, Electrical and Piezoelectric pressure transducers, McLeod gage, Pirani gage and Ionisation gage.

#### *Flow sensors*

5L

Head type flow meter, Electromagnetic flow meter, Rotameter, Anemometer, Ultrasonic flow meter.

#### *Temperature sensor*

5L

Mechanical and Resistance type temperature sensors, Thermocouples, Thermistor, Optical pyrometer.

*Sensor Modeling* 5L  
Modeling, Numerical modeling techniques, model equations. Different effects on modeling - Temperature, radiation, mechanical, chemical, magnetic, electrical like capacitive, resistive, piezo-resistive etc. Example of modeling/micro modeling of photodiodes, magnetic/mechanical sensor.

*Smart Sensor* 5L  
Methods of internal compensation, information coding, integrated sensor principles, present trends.

*Sensors in Robotics* 5L  
Potentiometers, Synchros and Resolvers, Optical encoders, Tactile and Proximity sensors, Non-contact ranging sensors, Ultrasonic transducers, Opto-electric sensors, Geomagnetic sensors, Gyroscopes.

*Actuators* 5L  
Pneumatic Hydraulic system: Control valves, cylinder, rotary actuators, Mechanical actuating system: Types of motion, Kinematics chains, Cams, Gear trains, Belts and chain drives, Electrical actuating systems: Solid-state switches, Solenoids, D.C. motors, AC motors, Stepper motors, Piezoelectric actuator, micro-actuators.

## **ME104 SIGNAL CONDITIONING AND DATA ACQUISITION SYSTEMS**

*Analog Signal Conditioning* 18L  
Introduction, Principles of Analog Signal Conditioning, Signal-Level Changes, Linearization, Conversions, Zero adjustment, Span adjustment, Level changing, AC/DC Power supply, Filtering and Impedance Matching, Passive Circuits, Divider Circuit, Bridge Circuits, RC Filters, Operational Amplifiers, Op Amp Characteristics, Op Amp Specifications, Op Amp Circuits in Instrumentation, Voltage Follower, Inverting Amplifier, Non-inverting Amplifier, Differential Amplifier, Active Filters, Protection Voltage-to-Current Converter, Current-to-Voltage Converter, Integrator, Linearization, Special Integrated Circuits (ICs), Industrial Electronics, Silicon-Controlled Rectifier (SCR), TRIAC, Design Guidelines.

*Digital Signal Conditioning* 15L  
Introduction, Review of Digital Fundamentals, Digital Information, Fractional Binary Numbers, Boolean Algebra, Digital Electronics, Programmable Logic Controllers, Busses and Tri-State Buffers, Converters, Comparators, Digital-to-Analog Converters (DAC), Analog-to-Digital Converters (ADCs), Sample and Hold, Multiplexer and De-multiplexer, decoder and encoder, Pulse modulations, Digital recorder.

*Data Acquisition System* 15L  
Introduction, Analog and Digital Data Acquisition Systems, Block diagram, Components, CPU, Memory, Input / Output, Sensors, ADC, DAC, Sample and Hold, Multiplexing, De-Multiplexing, Modulation, Display, Recording, Alarm, Programming, Voltage, Current, Frequency, Temperature, Displacement, Pressure measurement using Data Acquisition System (DAS), Application of Data Acquisition System in Power plant, Process control plant and Automation.

**ME 105      ADVANCED CONTROL SYSTEMS**

*Linear Control System*

10L

Signal flow graph, Transfer function, Open loop and Close loop control system, Linear and non-linear control system, Control system components, Conventional controller (P, PI, PID, Feed forward, Cascade etc.).

*Non-Linear Control System*

12L

Introduction, Common physical non-linear ties. The phase – plane method, singular points, Stability of non-linear system, Construction of phase – trajectories, System analysis by phase plane method. The describing function method, Derivation of describing function, Stability analysis by describing function method, Jump resonance, Liapunov's stability criterion, Popov's stability criterion.

*Digital Control System*

12L

Linear Difference Equations, Pulse response, Definition of Z-transform, Evaluation of z-transforms, Mapping between the S-plane and Z-transform, Inverse Z-transform theorems on Z-transforms, Limitation of Z-transform method, Pulse transfer of Z-transform method, Pulse transfer function of the zero-order hold and the relation between  $G(s)$  and  $G(z)$ , responses between sampling instants, Signal flow graph method applied to digital systems, Multi-rate digital system.

**The State variable Technique**

**14L**

State equation and state transition equation of continuous – data system, State equations of digital systems with all digital elements, State transition equation of digital time invariant systems, Digital simulation and approximation, Solution of time-invariant discrete state equation, Relation between state equation and transfer function, characteristic equation, Eigen values and Eigenvectors, Diagonalization of a matrix, Jordon Canonical form, Methods of computing the state transition matrix, Digital adjoint systems, Relationship between state, equation and higher-order difference equations, Transformation the phase-variable canonical form, The state diagram, Decomposition of digital systems, Response of sampled data system, Analysis of discrete time system with multi-rate, skip-rate and non synchronous samplings, State plane analysis. Stability of digital control systems.

**ELECTIVE - I**

**ME106      SIMULATION OF STRUCTURE, FIELD AND FLOW**

48L

Field idea, Basic ideas of the Finite Element-method (elements, nodes, mesh) for the calculation of fields, Selected fields and structures, Structural mechanics, Electrostatics and magnetostatics (analogue fields), Temperature fields, Coupled problems, Generation of a Finite Element-model for a given problem, Simulation of selected problems in Mechatronics.

## ME 107 DATA MANAGEMENT AND SOFTWARE SYSTEMS

### **Data Management**

**10L**

Introduction to data storage, Data modeling methods, Overview on relational and object oriented databases. Concepts of Product Data Management: Methods, tools and processes of the today and future product development, Information technology, management, versioning, control and distribution of product data, The architecture and functionality of PDM-Systems.

### **Software Engineering**

**8L**

Importance of Software Engineering, Life Cycle models, Waterfall models, Prototyping model, Spiral model, RAD.

### **Requirement Analysis**

**10L**

Function Modeling and Data flow, Data Modeling, Structured Analysis, Logical & Physical DFDS, ERD, Data Dictionary Software Project Planning, Logical metric, Cost Estimation – COCOMO model

### *Relational Model*

**6L**

Relational Algebra, Database Design Techniques, Functional Dependency, Normalization.

### **System Structure**

**6L**

File and System Structure, File organization, indexing & hashing concepts of Object Oriented Database.

### **Programming**

**8L**

Introduction to Programming Concepts, C/C++, Programming Structure, Branching, looping, Arrays, Pointers, Software development.

## ME 108 ADVANCED ELECTRICAL DRIVES

### *Introduction to Electrical Drives*

**6L**

Electrical Drives, Parts of Electrical Drives, Electrical motors, Power modulators, Sources, Control unit, Choice of Electrical Drives, Dynamics of Electrical Drives, Torque Equations, Speed Torque Conventions and Multi-quadrant Operation, Equivalent Values of Drive Parameters, Loads with rotational and translational motion, Measurement of moment of inertia, Components of Load Torques, Classification of Load Torques, Time and Energy-Loss in Transient Operations, Steady State Stability, Load Equalization.

### *Control of Electrical Drives*

**6L**

Modes of Operation, Speed Control and Drive Classifications, Closed-Loop Control of Drives, Current-limit control, Closed-loop torque control, Closed-loop speed control, Closed-loop speed control of multi-motor drives, Speed sensing, Current sensing, Phase-locked-loop (PLL) control, Closed-loop position control.

### *DC Motor Drives*

**10L**

Dc Motors and Their Performance, Shunt and separately excited motors, Series motor, Compound motor, Universal motor, Permanent magnet motors, dc servo

motors, Moving coil motors, Torque motors, Starting Braking, Regenerative braking, Dynamic braking, Plugging, Transient Analysis, Transient analysis of separately excited motor, Energy losses during transient operations, Transient analysis of separately excited motor with field control, Speed Control, Methods of Armature Voltage Control, Ward Leonard Drives, Transformer and Uncontrolled Rectifier Control, Controlled Rectifier Fed dc Drives, Single-phase fully-controlled and half-controlled, Three-phase fully-controlled and half-controlled rectifier control of dc motor, Dual-converter control of dc motor,

#### *Induction Motor Drives*

10L

Three-Phase Induction Motors, Analysis and performance, Analysis of Induction Motor Fed from Non-Sinusoidal Voltage Supply, Starting, Soft start using saturable reactor starter, Unbalanced starting scheme for soft start, Braking, Transient Analysis, Starting and plugging, Energy losses, Speed Control, Pole Changing, Pole Amplitude Modulation, Stator Voltage Control, Control by ac voltage controllers and soft start, Variable Frequency Control from Voltage Sources, Voltage source inverter control, Cycloconverter control, Variable Frequency Control from a Current Source Current source inverter control, Eddy Current Drives, Rotor Resistance Control, Conventional methods, Static rotor resistance control, Slip Power Recovery, Static Scherbius drive, Static Kramer drive, Variable Speed Constant Frequency Generation, Squirrel-cage induction machine and Cycloconverter scheme, Wound-rotor induction motor and Cycloconverter scheme, Single-Phase Induction Motors: Starting, Braking, Speed Control, Linear Induction Motor and its Control, PWM voltage source inverter (VSI) induction motor drives, Load commutated inverter fed synchronous motor drives, AC Traction Employing Poly-phase ac Motors, CSI squirrel-cage induction motor drive, PWM VSI squirrel-cage induction motor drive, Load commutated inverter (LCI) fed Induction motor drive.

#### *Synchronous Motor*

8L

Synchronous Motors, Starting, Braking, Synchronous Motor Variable Speed Drives, Variable frequency control, Modes of variable frequency control, Variable frequency control of multiple synchronous motors, Self-controlled synchronous motor drive employing load commutated thyristor inverter, Self-controlled synchronous motor drive employing a Cycloconverter, Starting Large Synchronous Machines.

#### *Brushless dc Motor, Stepper Motor and Switched Reluctance Motor Drives*

8L

Brushless dc Motors Unipolar brushless dc motor, Bipolar brushless dc motor, Speed control of brushless dc motors, Important features and applications, Stepper (or Stepping) Motors, Variable reluctance, Permanent magnet important features of stepper motors, Torque versus stepping rate characteristics, Drive circuits for stepper motors, Switched Reluctance Motor.

## SECOND SEMISTER

### ME 201 MECHANTRONIC SYSTEMS DESIGN

#### *Introduction*

6L

The phases of design, Design considerations, codes and standards, optimum design process, design variables, cost functions, design constraints, optimum design.

#### *Design of Mechanical Elements*

10L

Mechanical springs, rolling contact bearing, journal bearing, Spur and helical gear, bevel and worm gears, shafts, axels and spindles, Flexible Mechanical Elements, Belts, timing belts, roller chains, flexible shafts, breaks, clutches, design of mechanisms, cams, four bar and five bar mechanism.

#### **Design of Control System**

10L

Design specifications, steady state performance, transit performance, specification for disturbance rejection, controller design using Bode plot, phase lag control design, phase lead control design, root locus in design.

#### **Design of Drive System**

10L

Selection of motors, Power rating, Design of power converter, controlled rectifier, Inverter, chopper, Design of control circuit, Analog controller, Digital controller, Design of computer control drive system.

#### **Design of Hydraulic System**

6L

Hydraulic circuit design, Actuator design, selection of pumps, selection of valves, design of control circuits.

#### **Optimization techniques**

6L

Linear programming, sensitivity analysis, non linear programming, steepest descent method, conjugate gradient methods, Deavidon – Fletcher Powell method, geometric programming, dynamic programming and multi objective optimization.

### ME 202 ADVANCED MICROPROCESSORS

#### *Introduction to Microprocessor*

10L

8085 Microprocessor Architecture and Its Operations, Memory, Input/Output (I/O), Microcomputer System, Interfacing Devices, Basic Instructions, Programming Techniques with Additional Instructions, Counter and Timing Delays, Stack and Subroutines, Code Conversion, BCD Arithmetic and 16-Bit, Data Operations, Software Development Systems and Assemblers.

#### *8086 Microprocessor Architecture*

12L

8086 CPU Pins and Signals, Address and Data Lines, Control and Status Lines,



Power and Timing Lines, Bus Cycle Definition, Address and Data Bus Concepts, System Data Bus Concepts, Executive Unit and Bus Interface Unit, Instruction Queue, Operating Modes, Minimum Mode, Maximum Mode, Clock Generation, Reset, READY Implementation and Timing, Interrupt Structure, Predefined Interrupts, User-Defined Software Interrupts, User-Defined Hardware Interrupts, The Interrupt Acknowledge Sequence, System Interrupt Configurations, Interpreting the 8086 Bus Timing Diagrams, Minimum Mode Bus Timing, Address and ALE, Read Cycle Timing, Write Cycle Timing, Interrupt Acknowledge Timing, Ready Timing, Bus Control Transfer Timing, Maximum Mode Bus Timing, Address and ALE, Read Cycle Timing, Write Cycle Timing, Interrupt Acknowledge Timing, Ready Timing, Other Considerations, Bus Control Transfer (HOLD/HLDA and RQ/GT), Minimum Mode, Maximum Mode.

*8086 Assembly Language Instruction and Programming* 8L  
 Instruction Set, Registers and Flags, General Purpose Registers, Pointer Registers, Index Registers, Segment Registers, Flags Register, How Instructions Affect the Flags Register, Addressing Modes, Program Memory Addressing Modes, Data Memory Addressing Modes, Addressing Mode Byte, Segment Override, Memory Addressing Tables, Instruction Set Mnemonics, Assembler-Dependent Mnemonics, 8086 Instruction Groups and Programming.

#### **8051 Microcontroller 8L**

8051 Architecture Interfacing, 8051 Instruction Set, 8051 Application,

*8085 / 8086 / 8051 Interfacing* 10L  
 Interfacing Peripherals (I/O'S) and Applications, Parallel Input/Output and Interfacing Applications, Keyboard and display Interface, Interrupts Interfacing Data Converters, Programmable Interface Devices, General Purpose Programmable Peripheral Devices, Serial I/O and Data Communication Microprocessor Applications.

### **ME 203 ADVANCED PROCESS CONTROL ENGG.**

*Introduction* 4L  
 Processes, control loop study samples of disturbances, control action.

*Basic control schemes and controllers* 10L  
 On – off Control, Time proportional control, PID Control, Pneumatic controller, Hydraulic Controller, Electronic Controller, Program Controller, Programmable Logic Controller.

*Complex Control* 6L  
 Ratio Control, Split range control, Cascade Control, Feed forward Control, Inverse Derivative Control, Anti-reset Control.

*Computer Control* 6L  
 Direct Digital Control, Digital Control Via Z-transition technique, Distributed Control Systems.

**Adaptive Control 4L**  
 Standard approaches, Self adaptive, predictive, Self tuning.

*Process Control System* 10L  
Boiler Control Steel Plant Instrumentation / Control System, control in Paper Industry, Distributive Column, Belt Conveyor Control.

*Digital Simulation* 8L  
Introduction, Digital model with sample and hold digital simulation numerical integration, digital simulation by the z-transformer.

## **ME 204 APPLICATION OF MECHATRONIC SYSTEMS**

### **Introduction 6L**

Definition of robot, classification of robots according to coordinate system and control method, Main components of robots – manipulator, sensors, controller etc , Robot characteristics – payload, reach, repeatability, accuracy, resolution.

### **Kinematics of Robot 4L**

Homogenous coordinates, homogeneous transformation matrices, Direct and Inverse Kinematics of robots.

### **Actuators and Controls 4L**

Characteristics of actuating systems, Actuating System – Hydraulic devices, pneumatic devices, electric motors, Microprocessor control of electric motors.

### *Robot End effecters* 4L

Types, mechanical grippers, other types of grippers, Tools as end effecters.

### **Sensors and Artificial Intelligence 6L**

Characteristics of Sensors, Position sensors, velocity sensors, acceleration sensors, force and pressure sensors, force and torque sensors, micro switches, touch and slip sensors, non-contact proximity sensors, Robot programming Languages – VAL, AML/2, ARM BASIC.

### **Robot Vision 10L**

Definition of image, digital image, Picture coding – gray scale images, binary images, non-length coding, differential – delta modulation, Object recognition and categorization, Dimensionality reduction, Segmentation of images, Object description, Categorization and recognition, Commercial vision systems – binary vision system, gray – level vision system, structured light vision system, character recognition systems, ad-hoc special purpose systems.

### **Application of Robots 6L**

Handling, loading, and unloading, Welding, Spray painting, Assembly, Machining, Inspection, Rescue robots, Underwater robots, Mobile robot, Parallel robot, Medical robot.

### **Mechatronic Elements of Modern CNC Machines 8L**

Machine Structure, Guide ways, Feed drives, Spindle and Spindle bearings, Measuring systems, Controls, software and operator interface, Ganging, Tool Monitoring.

## ELECTIVE – II

**ME 205      MANAGEMENT KNOW – HOW AND QUALITY MANAGEMENT**

## Evaluation of Management Thoughts 4L

Pre Classical View point, Classical View point, Behavioral view point, Quantitative view point, Contemporarily view point.

*What is Management ?* 8L

Management Functions, Roles, Skills, Principles of Management, Social Responsibility of Management, Management Styles.

**Organization** **12L**

Types, Structure, Determinants of organization design, Culture – Climate – Value system – Ethics – Attitude, Transactional Analysis, Development – HRD components, Environment, Organizational Behaviour – concepts-overview of motivational theories.

## Quality Management 6L

Historical Perspective – Contributions of Quality Gurus, Concept of Total Quality Management, Quality Management System – Overview of ISO 9000 Certification.

## Environmental Management 6L

Historical Perspective, Concept – Importance, Environment Management, System – Overview of ISO 14000 certification.

## Management Problem Solving Tools 12L

Overview of Scientific Management System, Qualitative methods – Delphi  
Project Planning – Gantt Chart – PERT/ CPM, Organizational Health,  
Scanning, – Brainstorming – Nominal Group Technique – SWOT analysis,  
Quality Problem Solving Aids – Histogram – Pareto Diagram – Cause &  
Effect Diagram (Ishikawa Diagram).

## ME 206 INDUSTRIAL ECONOMICS AND MANAGEMENT

**Industrial Economics** **15L**

Scope, Theories of Industrial location, Industrial policy of Government of India, Financing Industrial Development, Roll of financial Institution and commercial Banks, Project Appraisal, Cost benefit analysis, Man power planning, Globalization, International Market for products, Collective Bargaining and workers participation in Management.

## Evaluation of Management Thoughts 4L

Pre Classical View point, Classical View point, Behavioral view point, Quantitative view point, Contemporarily view point.

## What is Management? 4L

Management Functions, Roles, Skills, Principles of Management, Social Responsibility of Management, Management Styles.

**Organization****6L**

Types, Structure, Determinants of organization design, Culture – Climate – Value system – Ethics – Attitude, Transactional Analysis, Development – HRD components, Environment, Organizational Behaviour – concepts-overview of motivational theories.

**Quality Management****6L**

Historical Perspective – Contributions of Quality Gurus, Concept of Total Quality Management, Quality Management System – Overview of ISO 9000 Certification.

**Environmental Management****6L**

Historical Perspective, Concept – Importance, Environment Management, System – Overview of ISO 14000 certification.

**Management Problem Solving Tools****7L**

Overview of Scientific Management System, Qualitative methods – Delphi Project Planning – Gantt Chart – PERT/ CPM, Organizational Health.

**ELECTIVE – III****ME 207 MICRO MECHATRONIC SYSTEMS****Micro-Mechatronics****12L**

Introduction, Micro-Mechatronics elements, Microprocessor, Micro-sensor, Micro actuator, Interface, Energy, Materials, Machining, Micro physics, Applications of Micro Mechatronics.

**Micro – Sensors****12L**

Introduction, Micro-sensor measurement principle, Micro-sensor fabrication techniques, modeling, Micro pressure sensors, Micro accelerometer, sensors, Micro thermal sensors, Micro floor sensors, Micro chemical sensors, Micro optical sensors, Micro sensor for humidity and displacement, application of micro sensors.

**Micro actuators****12L**

Introduction, classification of micro actuators, electromagnetic, electro static, piezo electric, optical micro – actuators.

**Case study of Micro Mechatronics systems****12L**

Testing of transportation Bridge surface materials, Transducer Calibration system, Strain Gauge Weighting system, Solenoid force, Displacement Calibration System, Rotary Optical Encoder, Thermal Cycle Fatigue of a Ceramic Plate, pH control, Temperature control system, Skip control of a CD Player.

Analog communication, Digital communication, Centralised, hierarchical and distributed control, Networks, Protocols, Open Systems Interconnection communication model, communication interfaces.

Mobile radio propagation: Large scale path loss, Small scale fading and multi-path, the wideband mobile radio channel, Mobile Communication Engineering: Cellular concept, Multiple access schemes, Global Mobile Communications.

### *Introduction*

4L

A New Breed of Processor: The Brain, Engineering of the Brain, A World of Fuzzy Thinking, Crisp versus Fuzzy Logics, Fuzzy and Neural Networks,

### *Biological Neural Networks*

8L

Neuron Physiology: The Soma, Cell Membrane Structure, Proteins: The Cell's Signature, Membrane Proteins, Membrane Strength, The Sodium Pump: A Pump of Life, Resting Potential, Action Potential: Cell Firing, The Axon: A Transmission Line, The Synapse, The Synapse: A Bio-computer, Types of Synapses, The Developing Neuron: Forming Networks, Neuronal Specialization, The Cell's Biological Memory, Weighting Factor, Factors Affecting Potassium-Ion Flow, Firing, in a Nutshell, Neuronal Diversity, Specifications of the Brain.

### *Artificial Neural Networks*

8L

Neural Attributes, Artificial Neural Networks, Same Mathematics Again, Modeling, Basic Model of a Neuron, Learning in Artificial Neural Networks, Supervised Learning, Unsupervised Learning, Reinforced Learning, Competitive Learning, The Delta Rule, Gradient Descent Rule, Hebbian Learning, Characteristics of ANNs, Important ANN Parameters, Artificial Neural Network Topologies, Modeling ANNs, ANN Learning and Program, Learning Algorithms, Discrimination Ability, Linearly Separable ANNs, Multilinear ANNs, Nonlinear Separable ANNs, ANN Adaptability, The Stability-Plasticity Dilemma.

### *Neural Network Paradigms*

10L

McCulloch-Pitts Model, The Perceptron, Original Perceptron, Perceptron Learning Procedure, Logic Operations with Simple-Layer, Perceptrons, Multilayer Perceptron, Delta Learning Algorithm, ADALINE and MADALINE Models, ADALINE, MADALINE, Winner-Takes-All Learning Algorithm, Back-Propagation Learning Algorithm, Learning with the Back-Propagation, Algorithm, Mathematical Analysis, Applications, Criticism, Cerebellum Model Articulation Controller, (CMAC), Adaptive Resonance Theory (ART) Paradigm, The ART Algorithm, Hopfield Model, Mathematical Analysis, The Hopfield Learning Algorithm, Discrete-Time Hopfield Net, Competitive Learning Model, Memory-Type Paradigms, Random Access Memory (RAM), Content Addressable Memory (CAM), Bi-directional Associative Memory (BAM), Temporal Associative Memory (TAM), Linear Associative Memory (LAM) Real-Time Models, Linear Vector Quantization (LVQ), Self-Organizing Map (SOM), Probabilistic Neural Network (PNN), Radial Basis Function (RBF),

Time-Delay Neural Net (TDNN), Cognitron and Neocognitron Models.

*Fuzzy Logic*

6L

Propositional Logic, The Membership Function, Fuzzy Logic, Fuzzy Rule Generation, Defuzzification of Fuzzy Logic, Time-Dependent Fuzzy Logic, Crisp Logics, Fuzzy Logics, Temporal Fuzzy Logic (TFL), Time-Invariant Membership Function, Time-Variant Membership Function, Intervals, Semilarge Intervals, Interval Operators, Temporal Fuzzy Logic Syntax, Applying Temporal Fuzzy Operators, Defuzzification of Temporal Fuzzy Logic, TFL in Communications Systems, Temporal Fuzzification.

*Fuzzy Neural Networks*

6L

Fuzzy Artificial Neural Network (FANN), Fuzzy Neural Example, Neuro-Fuzzy Control, Traditional Control, Neural Control, Fuzzy Control, Fuzzy-Neural Control.

*Applications*

6L

Signal Processing, Image Data Processing, Handwritten Character Recognition, Visual Image Recognition, Communications Systems, Call Processing, Switching, Traffic Control, Packet Radio Network Routing and Scheduling, Communication Channels over Power Lines, Intelligent Control, Optimization Techniques.

**ME 210      REAL TIME AND EMBEDDED SYSTEMS**

48L

Real time and embedded real time systems, hardware and software architecture of real time systems, types of memory and memory management, interrupt, interrupt latency and interrupt service routine.

Real Time Operating System (RTOS) – Board Support Package (BSP), its role in embedded system, Task management, Race Conditions, Priority Inversion, ISR and Scheduling, Inter Task Communication, Timers.

Requirements Engineering – Requirements Engineering Process and its characteristics, Architecture and Design of Embedded System.

Real Time Software Design – Design Methodologies and models, Life Cycles.

## **Annexure - IIA**

**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Prasanta Sarkar
2. Date of Birth 02.01.1959
3. Educational Qualification Ph.D.
4. Work Experience



*( Signature )*

- Teaching 18 Years
  - Research 18 Years
  - Industry 10 Years
  - Others
5. Area of Specializations : Control Systems, Artificial Intellegence, System Identification
  6. **Subjects teaching at Under Graduate Level**  
Electrical Machine, Circuit Theory, Control Engineering, Instrumentation, Digital Signal Processing , Process Control & Instrumentation, Network synthesis, Modelling & Simulations.

**Post Graduate Level**

Advanced Control System, Digital Signal Processing, Mechatronics System Design, Mechatronics System Dynamics

7. Research guidance

		<b>No of papers published in</b>	
Masters's	13	National journals	6+2 under review
Ph.D.	1 degree awarded (2 ongoing)	International Journals	2 + 2 under review
		Conference	35

8. Projects Carried out : Two MHRD Projects, Govt of India. Amount 15.5 Lakhs
9. Patents : NIL
10. Technology Transfer : NIL
11. Research Publications : 43 + 4 under review
12. No. of Books published with details :  
One research article published in Edited book "Recent Trends in Mathematical Sciences" Editors J.C. Mishra and S.B. Sinha PP.403-412, Norora Publishing House, New Delhi.



**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Subrata Chattopadhyay

2. Date of Birth : 5<sup>th</sup> Day of July' 1965.



3. Educational Qualification : B.Sc. (Physics Hons, CU),  
B.Tech.(Electrical Engg., CU),  
M.Tech (Instrumentation Engg., CU) ( Signature )  
Ph.D. (Tech, CU)

4. Work Experience

- Teaching : 13 Years.  
- Research : 9 Years +  
- Industry : 10 Years  
- Others : NIL

5. Area of Specializations : (Electrical Machines and Power System,  
Measurements & Instrumentations)

6. **Subjects teaching at Under Graduate Level**

1) Basic Electrical Engineering 2) Electrical Machines 3) Network & Circuit Theory  
4) Electrical & Electronics Measurement 5) Material Science 6) Medical Electronics.

**Post Graduate Level**

1) Sensors and Actuators 2) Advanced Process Control

7. Research guidance

**No of papers published in**

Masters's	10	National journals	8
Ph.D.	3 (pursuing)	International Journals	15
		Conference	
		International	5
		National	20

8. Projects Carried out : NIL


9. Patents : NIL

10. Technology Transfer : NIL

11. Research Publications : National Journal – 8, International Journal – 15  
Conference : International – 5, National - 20

12. No. of Books published with details : NIL

**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

- |    |                           |  |   |
|----|---------------------------|--|---|
| 1. | Name :                    | Soumitra Kumar Mandal  |  |
| 2. | Date of Birth             | 07 <sup>th</sup> June 1971   |   |
| 3. | Educational Qualification | B.E. (Electrical), Bengal Engg. College (C.U.)<br>M.Tech. (Electrical), IT BHU, Varanasi<br>Ph.D., Punjab University, Chandigarh<br>Punjab Engineering College |   |

*(Signature)*

4. Work Experience

- Teaching : 15 Years
- Research : 9 Years.
- Industry
- Others

5. Area of Specializations : Power Electronics, Computer Controlled Drives, Artificial Intelligence

6. **Subjects teaching at Under Graduate Level**

- 1) Basic Electrical Engg. 2) Electrical Machines. 3) Power System 4) Power Electronics  
5) ANN & FUZZY Systems, 6) Microprocessor

**Post Graduate Level**

- 1) Industrial Drives 2) Signal Conditioning and DAS.

7. Research guidance

**No of papers published in**

- |           |            |                        |    |
|-----------|------------|------------------------|----|
| Masters's | 22         | National journals      | 4  |
| Ph.D.     | 1 pursuing | International Journals | 2  |
|           | -          | Conference             | 23 |
8. Projects Carried out : NIL
9. Patents : NIL
10. Technology Transfer : NIL
11. Research Publications : National Journal– 4, International Journal– 2, Conference -23
12. No. of Books published with details : NIL

**PROFILE OF FACULTY MEMBER WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Dr. Mrs. Sagarika Pal

2. Date of Birth : 02.11.1969

3. Educational Qualification : M.Tech., Ph.D.



4. Work Experience

( Signature )

- Teaching : 13 years

- Research : 4 years

- Industry :

- Others

5. Area of Specializations : Instrumentation, Measurement and Control

6. **Subjects teaching at Under Graduate Level**

1) Electrical Network 2) Measurement System 3) Microprocessor (8085, 8086) 4) Process Control 5) Control Engg. 6) Process System Analysis

**Post Graduate Level :**

1) Mechatronic System Dynamics 2) Sensors and Actuators 3) Process Control 4) Signal Conditioning and Data Acquisition System, 5) Application of Mechatronics System

7. Research guidance : NIL

**No of papers published in**

Masters's	10	National journals	1
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Ph.D.	-	International Journals	10
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	-	Conference	13
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8. Projects Carried out : Carried out one DST Sponsored project work "Non Contact 3 – D Part Recognition by Robot Vision System".

9. Patents : 01

10. Technology Transfer : NIL

11. Research Publications : 10 International + 1 National+ 13 Conference

12. No. of Books published with details : NIL

## **Annexure - III**

M.TECH COURSE

*in*

MANUFACTURING TECHNOLOGY



National Institute Of Technical Teachers' Training and Research, Kolkata  
**Block-FC, Sector-III, Salt Lake City**  
**Kolkata-700 106**



## First Semester

A.THEORY							
SL. NO.	CODE	SUBJECTS	CONTACTS (PERIOD / WEEK)				CREDITS
			L	T	P	TOTAL	
1.	MTI 101	Material Processing Technology	3	-	-	3	3
2.	MTI 102	Metal Cutting and Machine Tools	3	-	-	3	3
3.	MTI 103	Materials Science and Technology	3	-	-	3	3
4.	MTI 104	Welding Technology	3	-	-	3	3
5.		Elective-I	3	1	-	4	4
6.		Elective-II	3	-	-	3	3
Total of Theory						19	19

B.LABORATORY / PRACTICAL							
SL. NO.	CODE	SUBJECTS	CONTACTS (PERIOD / WEEK)				CREDITS
			L	T	P	TOTAL	
7.	MTI 191	Material Processing Lab		-	3	3	2
8.	MTI 192	Machine Tools Lab		-	3	3	2
9.	MTI 193	Lab of Industry Oriented Project on chosen subject from Elective II		-	3	3	2
Total of Laboratory / Practical						9	6
Total of Semester						28	25

**Elective: Two subjects to be chosen, one each from the following two Elective Groups.**

### **Elective – I (Outside field of specialization)**

<b>CODE</b>	<b>SUBJECTS</b>
MTI 105	Advanced Engineering Mathematics
MTI 106	Advanced Numerical Analysis with computer Applications
MTI 107	Fluid Control System
MTI 108	Instrumentation

### **Elective – II (Related to field of specialization)**

<b>CODE</b>	<b>SUBJECTS</b>
MTI 109	Robotics
MTI 110	Design of Production System
MTI 111	Computer Aided Design and Computer Aided Manufacturing
MTI 112	Operations Research

## Second Semester

<b>A.THEORY</b>							
<b>SL. NO.</b>	<b>CODE</b>	<b>SUBJECTS</b>	<b>CONTACTS (PERIOD / WEEK)</b>				<b>CREDITS</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>TOTAL</b>	
1.	MTI 201	Flexible Manufacturing System and CIM	3	-	-	3	3
2.	MTI 202	Quality & Reliability Engineering	3	-	-	3	3
3.	MTI 203	Automation	3	-	-	3	3
4.	MTI 204	Non-Conventional Production Process	3	-	-	3	3
5.	MTI 205	Material Handling System	3	-	-	3	3
6.		Elective-III	3	-	-	3	3
Total of Theory						18	18

<b>B.LABORATORY / PRACTICAL</b>							
<b>SL. NO.</b>	<b>CODE</b>	<b>SUBJECTS</b>	<b>CONTACTS (PERIOD / WEEK)</b>				<b>CREDITS</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>TOTAL</b>	
7.	MTI 291	Term Paper / Project Related to Dissertation		-	6	6	4
8.	MTI 292	Flexible Manufacturing System Lab & Robotics Lab		-	3	3	2
Total of Laboratory / Practical						9	6
Total of Semester						27	24

**Elective: One subject to be chosen from the following Elective Group**  
**Elective – III**

<b>CODE</b>	<b>SUBJECTS</b>
MTI 206	Materials Management
MTI 207	Management Information System
MTI 208	Human Resource Management
MTI 209	Geometric Modeling for CAD



### Third Semester

<b>A.THEORY</b>							
<b>SL. NO.</b>	<b>CODE</b>	<b>SUBJECTS</b>	<b>CONTACTS (PERIOD / WEEK)</b>				<b>CREDITS</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>TOTAL</b>	
1.	MTI 301	Seminar	-	-	-	3	2
2.	MTI 302	Pre-submission Defense of Dissertation	-	-	-	-	4
3.	MTI 303	Dissertation (Progress)	-	-	-	24	18
Total of Semester						27	24

### Fourth Semester

<b>A.THEORY</b>							
<b>SL. NO.</b>	<b>CODE</b>	<b>SUBJECTS</b>	<b>CONTACTS (PERIOD / WEEK)</b>				<b>CREDITS</b>
			<b>L</b>	<b>T</b>	<b>P</b>	<b>TOTAL</b>	
1.	MTI 403	Dissertation (Completion)	-	-	-	24	18
2.	MTI 404	Post Submission Defense of Dissertation	-	-	-	-	6
Total of Semester						24	24

## MATERIAL PROCESSING TECHNOLOGY (Code: MTI-101)

**Important Engineering Materials** and their alloys, Mechanical properties of material, Deformation of metals, various materials processing techniques.

**Introduction:** Classification of welding processes, Advantages and limitations of welding, Practical applications.

**Casting processes:** Metal fluidity, flow, gating, risering, solidification, thermal effects, different casting processes, design of castings, plant and equipment and quality control.

**Forging:** Equipment, die design, forging load calculation, defects & remedies.

**Rolling :** Hot rolling, cold rolling, rolling mills, rolling load calculations, defects.

**Press Working:** Processes, Die design, Shearing, Drawing, Bending etc. **Extrusion**

**Process:** Extrusion force, products, extrusion presses **Polymers, Ceramics &**

**Composites:** properties and fabrication process. **BOOKS:**

- |   |   |
|---|---|
| 1. Metal Forming Processes and Analysis:    | - Betzalel Avitzur<br>- Tata McGraw -Hill Publishing Company Ltd. |
| 2. Production Engineering                   | - Delala  |
| 3. Manufacturing Technology                 | - P.N.Rao<br>- Tata McGraw -Hill Publishing Company Ltd.          |
| 4. Manufacturing and Technology             | - Scrope Kalpakjia- 3 <sup>r</sup> Edition<br>- Addison Wesley    |
| 5. Materials and Processes in Manufacturing | - De Garmo etal: PHI  |
| 6. Metal Forming                            | - S.Kumar   |

## METAL CUTTING AND MACHINE TOOLS (Code: MTI-102)

### **Essential features of metal cutting:**

Tool geometry of single point cutting tools;  
Chip shape, chip formation;  
Chip tool interface; chip flow; Built up edge; machined surface

### **Force in metal cutting:**

Stress on the shear plane; Forces in the flow-zone; The shear plane angle and minimum energy theory; Forces in cutting metals and alloys; Stresses on the tool; Stress distribution; Dynamometry.

### **Heat in metal cutting:**

Heat in chip formation; Heat at the tool/ work interface. Interface temperature with a built-up edge, Interface temperatures with a flow-zone; Heat flow at the tool clearance face; Heat in areas of sliding; methods of tool temperature measurement; thermocouple, Inserted thermocouples, Radiation methods; Changes in hardness and micro structure in steel tools; Measured temperature distribution in tools; Relationship of tool temperature to cutting speed.

### **Cutting Tool Materials:**

Carbon steel, High speed steel, cemented carbides, Tungsten carbides, Cobalt alloys, ceramic tools, Alumina based composites.

The study of the materials in respect of structure, composition, properties, Tool life, plastic deformation under compressive stress, conditions and techniques of use.

### **Machinability:**

Study of different work materials, Mg, Al, Cu, Gun metal, Cupro-nickel, Iron and steel, Cast Iron, Nickel and Nickel alloys, Titanium and titanium alloys, Zirconium.

### **Cutting Fluids:**

Low speed cutting fluid: carbon tetrachloride and other fluids at low cutting speed, High Speed Cutting fluid, water -base cutting fluids.

### **Machining Economics:**

Machining costs; stepless speed change, Tool and work materials, Tools cutting simultaneously, optimum production rate.

### **General requirements of machine tools:**

Standardization of spindle speeds and feed rates; layout of speed change gears, mechanical drives for the operational movements. Chatter in Machine Tool; Stiffness and rigidity of the separate constructional elements and their combined behaviours under load, Design of machine tools structures, slideways, spindles and spindle bearings.

Philosophy of Numerical Control: Its advantages and disadvantages, Basic architecture of Numerically control Machine tools, Data Processing Unit and control loop unit, sensors, actuators, Computer Numerical Control: Pulse reference system,

Sampled Data System, Adaptive Control and Part programming, Manual Part Programming: Machine Tool formats, Function codes, Complete program.

**Computer Aided Part Programming:**

Languages: APT, ADAPT, EXAPT, SNAP

**BOOKS:**

1. Metal Forming
  - E.M. Trent
  - Butterworth Heinemann Ltd.
2. Metal Cutting Principles
  - Milton C. Shaw
  - Oxford University Press
3. Numerical Control and Computer Aided Manufacturing
  - T.K.Kundra, P.N.Rao, N.K.Tewari
  - Tata McGraw -Hill Publishing Company Ltd.
4. Machine Tools Design
  - N.K.Mehata
  - Tata McGraw -Hill Publishing
5. Computer Control of manufacturing systems
  - Y.Koren:
  - McGraw-Hill Publishing Company Ltd.
6. Principles of Metal Cutting
  - G.Kuppuswamy
  - Universities Press
7. Principle of Machine Tools
  - Sen and Bhattacharya
  - New Central Book Agency
8. Design of Machine Tools
  - S.K.Basu&D.K. Pal
  - Oxford & IBH Publishing Co.

# MATERIALS SCIENCE AND TECHNOLOGY (Code: MTI-103)

## **Introduction:**

Classification of materials; Future trends in materials usage.

## **Atomic Structure and Inter - atomic Bonding:**

Atomic Structure; Atomic and molecular bonds.

## **Structure of Crystalline solids:**

Crystal Structures: Crystallographic direction and planes; Crystalline and non crystalline materials.

## **Crystalline Imperfections and Diffusion in Solids:**

Point defects; Crystalline imperfection; Atomic diffusion in solids; Industrial application of diffusion processes.

## **Mechanical Properties of Metals:**

Elastic deformation; Plastic deformation; Dislocations and Plastic deformation; Mechanisms of strengthening metals, Recovery, Recrystallization and grain growth; Fracture; Fatigue; Creep.

## **Phase Diagrams:**

Equilibrium phase diagrams; Iron-carbon system; Phase transformations; Micro structure and property, Changes in iron-carbon alloys.

## **Engineering Alloys and Thermal Processing**

Ferrous alloys; Non ferrous alloys; Annealing process; Heat treatment of steels; Precipitation hardening.

## **Ceramic Materials Applications and Processing:**

Ceramic crystal structures, mechanical properties; Glasses; Clay products. Refractories.

## **Polymeric Materials**

Characteristics, applications and processing, Polymers; Mechanical and thermo-mechanical characteristics.

## **Composite Materials**

Particle- reinforced composites; Fiber-reinforced composites; structural composition.

## **Corrosion and Degradation of Materials:**

Corrosion of materials; Corrosion of ceramic materials; Degradation of polymers.

## **Electrical Properties**

Electrical conduction; Super conductivity; Electrical conduction in ionic ceramics and in polymers; Dielectric behaviour.

## **Magnetic Properties**

Diamagnetism, Paramagnetism, Ferromagnetism, Anti-ferromagnetism, Soft and hard magnetic materials.

## **Optical Properties**

Optical properties of metals: Optical properties of non-metals: Applications of optical phenomena.

## **BOOKS:**

1. Material Science - Van Black
2. Material Science and Engineering An Introduction: William D. Callister, Jr. John Wiley & Sons, Inc . .
3. Manufacturing Technology: (P.N. Rao) Tata McGraw Hill Publishing Limited.
4. Material & Processes in Manufacturing De Garmo, Black, Krieger Macmillan Publication Company
5. Science of Engineering Materials: Srivastava & Srinivasan New Age Inter.

## **WELDING TECHNOLOGY (Code: MTI-104)**

**Metallurgy of Welding, Brazing and soldering. Safety**

**Recommendation in Welding and cutting.**

**Gas Welding Processes and Equipment, Arc Welding Processes and Equipment including TIG and MIG**

**Welding of Non-ferrous Metals and Cast Iron.**

**Thermal considerations in Welding, distortion and shrinkage, residual stresses.**

**Resistance Welding**

**Solid State Welding : Ultrasonic welding, Explosion Welding, Friction Welding.**

**Thermo Chemical Welding Process: Thermit welding, Atomic hydrogen welding.**

**Radiant Energy Welding Processes:**

**Electron beam welding, Laser Beam welding, Underwater Welding Process.**

**Brazing, Braze Welding, Soldering, Strength and Toughness of welded joints, Welding defects, Fatigue of welded joints.**

**Inspection and Testing of Welds:**

**Welding Automation.**

**Classification of welding automation, Machine welding: Automatic welding, Economics of welding automation.**

### **BOOKS:**

1. Advanced Welding Systems Vol-I, II and III : - (Jean Cornu) Jaico Publishing House
2. Manufacturing Technology - P.N.Rao Tata Mc Graw -Hill
3. Manufacturing Science Amitabha Ghosh and Asok Mallik, Affiliated East West Press
4. Welding Technology - O.P.Khanna Dhanpat Rai & Sons

- 5. Welding and Welding Technology
  - Richard & Little
  - Tata McGraw Hill Publishing Ltd
- 6. Welding Technology & Design
  - V.M.Radha Krishnan
  - New Age International Publishers.



## ADVANCED ENGINEERING MATHEMATICS (Code: MTI-105)

**Matrices:** Linear transformation, Matrix operation; Characteristic equation of a matrix. Eigen values and Eigen Vectors, Cayley- Hamilton theorem, Diagonalisation of a square matrix, Solution of simultaneous linear and normal equations, Eigen Value Problem of Real symmetric Matrix Applications.

**Numerical Methods:** Interpolation by Polynomials (Equal & Unequal Intervals), Curve Fitting, Error Analysis, Solution of system of linear equation by Gauss-Seidel iterative method, Solution of Non-linear equation by Newton Rapson method, Numerical Integration by Gauss-quadrature, Solution of ordinary differential equation by Rayleigh- Ritz and Galerkin method. Monte Carlo Simulation. Applications.

**Statistics:** Measures of Central Tendency and dispersion. Probability and Probability Distributions, Correlation and Regression. Testing of hypothesis. Analysis of Variance. Statistical Quality Control, Applications.

**Numerical Solution of Differential Equations (ODE & PDE):** Taylor's Series Method, Runge-Kutta method (Fourth order & above), Raleigh Ritz method, Euler - Lagrange Method.

### BOOKS:

1. Advanced Engineering Mathematics- Erwin Kreyszig, John Wiley & Sons, Inc
2. Advanced Engineering Mathematics- Stanley Grossman and William R. Derrick, Harper & Row Publishers

## ADVANCED NUMERICAL ANALYSIS WITH COMPUTER APPLICATIONS (Code: MTI-106)

### A. Approximate numbers and operations with them

**Rules for writing approximate numbers:** rounding off, rules origin, growth and propagation of errors. Floating point numbers: Normalized Floating point numbers, Floating point, **Arithmetic:** single and double precision. Stability in Numerical Analysis, Overflow and Underflow.

### B. Calculus of finite differences, Relation between operators $A, V, E, \Delta$ etc.

**Interpolation:** Gauss, Lagrange and Hermite interpolation formulae, Estimation Numerical Differentiation.

**Numerical Quadrature:** Composite Trapezoidal and Simpson's rule and associated errors. Practical error estimates, Asymptotic errors, Gauss quadrature, Numerical evaluation of simple singular integrals.

### C. Approximation of real functions:

Least square approximation with polynomials: Trigonometric interpolation. Fast Fourier Transform, Approximation with exponential functions, with chebyshev polynomials and splines, Rational approximation (Pade's approximation), Curve smoothing with splines, Error in approximations.

### D. Finite Element: Direct Formulation, Variational Formulation. Application: Elasticity Problems. General field Problems, Fluid Flow Problems.

## BOOKS:

- |   |  |
|---|--|
| 1. Numerical Algorithms                                 | - E.V.Krishnamurthy & S.K.Sen                                      |
| 2. Numerical Methods                                    | - Bakhvalov  |
| 3. Numerical Methods for Scientific & Engg. Computation | - M.K.Jain, S.R.K. (Iyengar & R.K.Jain)<br>- Wiley Eastern Limited |
| 4. Numerical Methods for Science & Engg.                | - R.G. Stanton   |
| 5. Numerical Treatment of Differential Equations.       | - L.Collatz  |
| 6. Numerical Methods for PDE                            | - W.F.Ames, Thomas Nelson,<br>London                               |
| 7. Numerical Solution of ODE and PDE:                   | - (L.Fox)Pergamon Press, Oxford                                    |
| 8. Numerical Methods:                                   | - (S. S. Sastri)Prentice Hall of<br>India.                         |

## FLUID CONTROL SYSTEM (Code: MTI-107)

**Fluid Power System:** introduction, advantages and disadvantages, applications, components of a fluid power system.

Characteristics of fluid drive, positive displacement pumps and motors, Control valves, Design of simple hydraulic circuits, Hydraulic Servovalves and Servomotors, hydraulic servo systems, accumulators, its circuits and Industrial applications.

### **Pneumatics:**

Air preparation, fluid conditioners, air control orifice, valve and actuators, circuits design considerations, basic circuits, vacuum system.

**Fluid Logic Control Systems:** MPL control systems and its use in fluid power circuits. Principles of fluidic logic control. Fluidic devices and sensors. Fluid power systems, electrical controls for various components in fluid power circuits.

### **Fluid Power Maintenance and Safety:**

Scaling devices, filters, strainers, wear of moving parts, problems caused by gases, temperature control, Trouble shooting. Safety consideration.

**Fluid Distribution System:** Hydraulic pipes & fittings, tubes and fittings, flexible hoses. Pneumatic piping - ring main, Erection and Commissioning of piping systems.

## BOOKS:

1. Fluid Power with Applications- Esposito A. (4<sup>th</sup> Edition) Prentice Hall International
2. Fluid Power Control- Ed. By Blackburn, Shearer Reelhof
3. Hydraulic Control System- H.E. Meritt
4. Fluid System and Control -McClay and Martin
5. Pneumatic Automation- Fawcett
6. Electrohydraulic Servomotor- C.R. Burrows
7. Fluidic Amplifier -Kirshner
8. Fluidic Logic Circuits- Foster & Parker

- 9. Pneumatic System
  - Principles and Maintenance:  
S.R. Mazumder.
  - Tata Me Graw-Hill Publishing  
Company Limited.
- 10. Practical Pneumatics:
  - Chris Stacey- Arnold

## INSTRUMENTATION (Code: MTI-108)

Static and Dynamic characteristics. First and Second Order Static and Dynamic Calibration.

Mathematical Modeling of Instrumentation, Transducers, Input, Output and Tandem Transducer: Signal conversion in Input and Output Transducers, Transducers for measurement of pressure, Temperature, flow, displacement, strain, humidity, Fibre-optic transducers and their applications.

Principles of Storage Oscilloscopes, Spectrum Analyzer, Generators, Sweep Oscillators, Pulse Generators, XY Recorders.

Control theory: transfer function, block diagram algebra, system response, PID controller.

PLC: data acquisition system, digital signal processing.

### BOOKS:

1. Principles of Industrial Instrumentation D.Patranabis
2. Instrumentation Devices and Systems C.S. Rangan, G.K. Sharma and V.S.V Mani  
Tata McGraw -Hill Publishing Company.

## **ROBOTICS (Code: MTI-109)**

**Robot Geometry:** Degrees of freedom, Robot classification based on physical configuration, classification based on control system, Work Envelop, Mobile Robots.

**Robot Drives :** Hydraulic, Pneumatic, Electric, Mechanical Gear and Cam.

**Motion Control:** Axis limit, Point-to-point, Contouring, Line Tracking. **Robot**

**Tooling:** Grippers, Appliances, Part-compliant tooling. **Programming :** VAL,

**AML 12, ARMBASIC**

**Sensing Capability:** Gripper pressure sensor, Electro-optic Force sensor, Optical Sensor, Robot Vision System, Tactile Sensor

**Performance Specification:** Payload, Repeatability, Speed.

**Robot Utilization and Justification:** Labour Resistance, Economic Justification.

**Robot Motion Analysis:** Forward Kinematics Transformation, Backward Kinematics Transformation, Basic Homogeneous Transformation.

**Robot application:** Welding, Spray painting, Assembly, Machine Loading, Special applications.

### **BOOKS:**

- |   |                                       |
|---|---------------------------------------|
| 1. Robotics for Engineers                       | - Yoram Koren.                        |
|   | - Me Graw -Hill Book Company          |
| 2. Robots and Manufacturing Automation          | - C.Ray Asfal                         |
|   | - John Wiley & Sons Inc.              |
| 3. Robotics Technology and flexible automation  | - S.R. Deb,                           |
|   | - Tata McGraw Hill Publishing Company |
| 4. Robotic Engineering; An Integrated Approach: | - Richard D.Klafter, Thomas A.        |
|   | (Chemielewski and Michael Neign)      |
|   | - Prentice Hall of India Pvt. Ltd.    |

## DESIGN OF PRODUCTION SYSTEM (Code: MTI-110)

### **Locational Anansis:**

System, concepts in Production, Models of Production System, System Synthesis, Productivity, Automation & Computerization.

Product Development, Production planning. Forecasting, Resource allocation, Project scheduling, Scheduling & Sequencing.

Material management and Inventory Control, Production, Inventory System, Industrial, Dynamics, Aggregate planning, Operations Economy, Cost and Budgetory Control.

### **BOOKS:**

1. Modern Production & Operations Management -Elswood S.Buffa, Wiley Eastern, New Delhi.
2. Production Planning and Control - K.G.Lockyr
3. Productivity Engineering & Management- D.J.Sumanth.-Mc Graw-Hill
4. Production Systems- J.L.Riggs John Wiley
5. Production and Operations Management- N.G.Nair, Tata Mc Graw-Hill Publishing Company Limited.,
6. Production Planning and Inventory control- Magee and Boadman

# COMPUTER AIDED DESIGN AND COMPUTER AIDED MANUFACTURING (Code: MTI-111)

## **Fundamental of CAD:**

Design processes, application of computer for design, creating manufacturing database, benefits of CAD.

## **Hardware to CAD:**

Design Workstation, graphics Terminal, Input devices, Output devices, CPU, secondary storage.

## **Computer Graphics Software and Database:**

Functions of a graphics package, constructing geometry, transformations, database structure and context, wireframe versus solid modeling.

## **Computer Numerical Control of Machine Tools:**

Basic components of NC System, NC Procedure, NC coordinate system, NC motion control systems, Manual part programming, Computer assisted part programming.

## **Robot Technology:**

Physical configuration, Basic motion, Programming, End effectors, Work Cell Control and Interlocks.

## **Group Technology:**

**Part** Families, Parts Classification and coding, Group Technology, Manufacturing Cells.

## **Computer Aided Process Planning**

Retrieval Type Process Planning Systems, Generative Process Planning Systems, Machinability Data Systems.

## **BOOKS:**

1. CAD /CAM: Computer -Aided Design and Manufacturing - Mikell P.Groover and Emory W.Zimmers Jr.  
- Prentice Hall of India.
2. CAD / CAM: - Principles, practice and manufacturing Management : Chris Me Mahon and jimmie Browne  
- Addison Wesley Longman Limited



## OPERATIONS RESEARCH (Code: MTI-112)

Introduction to Operations Research (OR); History of OR; Principles of modeling, Impact of OR; Implementation of OR Projects, Different OR Problems.

Linear Programming (LP); Introduction, LP model, problem formulation, examples and case studies, limitations of L.P, geometrical interpretation, essence of simplex method, algebra of simplex method, simplex procedures, degeneracy and other complications, dual simplex method, sensitivity analysis, computer implementation.

Transportation problem, Assignment problem, Sequencing problem.

Network analysis: Shortest-route problem, The minimal spanning tree problem, the maximal flow problem.

Project Scheduling: Critical Path Method (CPM), Network Construction and determination of critical path, Crashing, Resource smoothing. -

Non-Linear Programming: Graphical illustrations, Integer Linear Programming - applications, Graphical solution, branch and bound solutions; Dynamic programming.

Inventory Models: EOQ model, Sensitivity analysis in EOQ model, economic lot size model, EOQ with planned shortage, quantity discounts for EOQ model.

Waiting Line Models: Structures, Single channel waiting line model, Multiple Channel waiting line model, economic analysis of waiting lines.

Forecasting techniques.

### BOOKS:

- |  |  |
|--|--|
| 1. Introduction to Operations Research         | - Frederick S. Hillier, Gerald J. Lieberman<br>- McGraw Inc. |
| 2. Operations Research, Principle and Practice | - Avindran, Phillips and Solberg<br>- John Wiley & Sons      |
| 3. Fundamental of Operations Research          | - R.L. Ackoff, M.W. Sasieni                                  |
| 4. An Introduction to Management Science       | - Anderson, Sweeney, Williams,<br>- West Publishing Co.      |
| 5. Operations Research: An Introduction        | - H.A. Taha<br>- PHI   |

## FEXIBLE MANUFACTURING SYSTEMS AND CIM (Code: MTI-201)

FMS: Group Technology : part families, parts classification and coding production flow analysis, machine cell design, benefits of group technology.

Flexible Manufacturing System vs Conventional Manufacturing System, its economic and Components of FMS.

**Types of flexibility:** Machine flexibility, Process flexibility, Product flexibility, Routing flexibility, Volume flexibility, Expansion flexibility, Operation flexibility, Production flexibility.

FMS Workstations, materials handling system, storage system, computer control system, Planning the FMS.

Analysis methods for flexible manufacturing system, Application and benefits.

Computerized Manufacturing Planning Systems: Process planning, production planning, materials requirements planning, capacity planning, Shop floor control, factory data collection system, automatic Identification systems, bar code technology, automated data collection systems.

Computer Networks for manufacturing: Hierarchy of computers, local are networks, manufacturing automation control, future automated factory, human workers and social impact.

**CIM:** Elements of CIM, Software for CIM, benefits and strategies.

### BOOKS:

1. Automation, Production Systems and Computer Integrated Manufacturing - Mikell P.Groover  
- Prentice Hall of India Pvt. Ltd.
2. Production Engineering - Delelas
3. Robotics Technology and Flexible Automation - S.R.Deb  
- Tata Me Graw Hill Publishing Company Limited.

## QUALITY AND RELIABILITY ENGINEERING (Code: MTI-202)

Quality, Quality Control and Total Quality Concepts, Total Quality System Requirements

**Quality planning and Quality Management:** Continuous quality Improvement Methods.  
Quality Costs analysis, Life Cycle Cost.

**Statistical Tools in Quality Inspection:** Testing measurements, Concept of sensor technology: Mechanical, Electrical, electronic and optical sensor for feature measurement of product, Contact and non contact Automated Inspection method.

Quality Assurance.

Quality Engineering.

Quality Information System

Commitment to Quality: Consumer, Produced Market place.

Product and System Reliability

Reliability Testing and Analysis.

Reliability Improvement Methods

Availability

Maintainability

Fault Tree Analysis

Failure mode Effect and Critically Analysis.

Maintenance Strategies & Management.

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Reliability Testing and Analysis.

Reliability Improvement Methods

Availability

Maintainability

Fault Tree Analysis

Failure mode Effect and Critically Analysis.

Maintenance Strategies & Management.

### BOOKS:

- |   |                                    |
|---|------------------------------------|
| 1. Total Quality Control  | - Armand V. Feigenbaum             |
|   | - Me Graw-Hill Publishing Company  |
| 2. Quality Planning and Analysis                                | - Jurand Gryna                     |
| 3. Reliability & Maintainability Engineering                    | - C.E. Ebeling                     |
|   | - Me Graw- Hill Publishing Company |
| 4. The Assurance Sciences                                       | - Halber                           |
| 5. Non destructive Testing Techniques                           | - Don E. Bary & Don Me Brid        |
| 6. Modern method for Quality Control & Improvement              | - Harrison M.Wadsworth             |
|   | - John Wiley and Sons.             |
| 7. Taguchi MethodExplained                                      | - T.Bagchi                         |
|   | - Prentice Hall                    |
| 8. Statistical Quality Control                                  | - Grant                            |
| 9. Assurance Science- An Introduction to Quality                | - S.Halpem Control & Reliability   |
| 10. Manufacturing Management                                    | - Moore                            |
| 11. Mechanical Reliability                                      | - Carter                           |
| 12. Terrotechnology: Reliability Engg. & Maintenance Management | - S.K.Basu & B.Bhadury.            |
|   | - Asian Books                      |

Reliability in Engg.Design.

- Kapur & Lamberson ( Pitman)

## **AUTOMATION (Code: MTI-203)**

**Introduction to Automation:** Basic elements of an automated system, Automation functions, levels of automation.

**Industrial Control System:** Process industries versus manufacturing industries; continuous vs discrete control; Computer process control.

Sensors, Actuators and Other Analog & digital Control System Components.

**Manual Assembly Lines:** Assembly line design; Line balancing algorithms;

**Automated Production Lines:** Transfer lines; Fundamentals and **design of automated assembly** systems.

**Conventional numerical control,** NC part programming.

**Industrial Robotics: Introduction,** Mobile robots, tele operated robot, robot for different purposes. Industrial Applications: Material handling, machine loading and **unloading, welding,** spray coating, process operations, assembly and inspections. Robot Programming.

FMS, Product Design and CAD, CAD /CAM integration. Computer graphics software and data base.

Shop floor control and computer process monitoring, computer process inter-facing, computerized process planning and quality control.

### **BOOKS:**

1. Automation, Production Systems and - M.P. Grover Computer- Integrated Manufacturing  
- PHI
2. Computer Control of Manufacturing System - Yoram Koren  
- Mc-Graw Hill Publishing Company
3. Numerical Control & Computer Aided - T.K.Kundra. P.N.Rao and  
N.K. Manufacturing Tcwuri  
- Tata Mc Graw Hill Publishing Company Limited.
4. Computer Controlled Industrial Business - J.A. Giptan Processes & Robotics
5. Computer Integrated Manufaclurinu Hand - Teieholz Frie and .J.N.Orr  
Book

## NON-CONVENTIONAL PRODUCTION PROCESSES (Code: MTI-204)

Abrasive jet Machining: Fundamental principle. Applications Process parameters, MRR models.

Water Jet Machining.

Fundamental principles of USM. Process parameters. Transducers -types, materials and design. Horn design. Shaw's model of MRR. other applications of ultrasonic.

Laser Beam Machining. Plasma Beam Machining.

Electrical Discharge Machining : Operating principles of EDM. Effects of Die-electric fluids.

Electrode materials. Power generators. Process parameters and their effects. Flashing.

Applications.

High energy rate forming processes. Nano Technology Electrochemical Machining.

### BOOKS:

- |                               |  |
|-------------------------------|--|
| 1. Manufacturing Science      | - Amitabha Ghosh and Asok Kumar Maliik   |
|                               | - Affiliated East - West Press Pvt. Ltd. |
| 2. Materials and Processes in | - De Garmo and Kohsa Manufacturing       |
|                               | - Mcmiliian Publishing Company.          |
| 3. Nano Technology            | - N.Taniguchi                            |
|                               | - Oxford University Press (1996)         |
| 4. Non Conventional Machining | - P.K.Misra                              |
|                               | - Narosa Publishers                      |
| 5. Modern Machining Process   | - Pandey & Shan                          |
|                               | - Tata McGraw Hill                       |

## MATERIAL HANDLING SYSTEM (Code: MTI-205)

Over view of basic principles, equipment and operation, importance of material handling equipment in relation to productivity and cost of production.

Principle groups of equipment. Unit load, bulk load and their designation by code, various load handling attachments.

**Jib crane**, portal, semi **portal** and mobile crane:

Essential parts, operating principles and different speeds, structural parts, principles of design of luffing gear hoisting mechanism, slewing gear, basic principle of lever lifting mechanisms, stability of crane, horse power calculation for mobile crane and other type of jib cranes, Examples of Design.

**Lift and Hoists**:

EOT Cranes Essential parts, operating principles and different speed, structural parts, essential design characteristics of hoisting mechanism, long travel and cross travel mechanism, motor selection, brake specification, safety arrangements, electrical control system. Examples and design.

**Belt** Conveyors:

Essential components of a belt conveyor system, specification and construction, speed of belt, details of idlers, pulleys and take Ups. determination of capacity and tensions of belt, calculations of motor horse power, Examples on design of belt conveyor system.

**Roller** Conveyors:

Applications, Essential components, specifications and constructional details, calculations of motor horse power

**Screw** Conveyors:

Application of screw conveyors types of screw flights, various layouts, design considerations, capacity speed and size, calculation of horse power and torque, screw thrust, feeders, flexible screw conveyors.

Bucket Elevators: Applications, Constructional details. **Pneumatic** Conveyors:

Introduction, Negative pressure systems: power producers, feeding devices, material collecting and separating equipment, silo and day tank vents. control systems. Positive pressure systems: different types of feeders, branch line gates, blowers, discharge, silo and day tank vents, control systems. Negative positive pressure system. Common conveying equipment: elbow, pipes, hopper vibrators, drum unloaders. Design examples with calculations.

### **Hydraulic Conveyors:**

Sluice systems, bottom ash hoppers, dewatering bins; settling and sump pumps. Silo and dewatering bin arrangement, Material disposal, Water balance, Sluice system design calculations.

Industrial trucks, hoppers, chutes

Special Material Handling Equipment: Robots, AGV

### **BOOKS:**

- |   |  |
|---|--|
| 1. Material Handling Equipment                              | - Rudenko                                    |
|   | - Peace Publishers, Moscow                   |
| 2. Conveyors and related Equipment                          | - Spivanosky                                 |
|   | - Peace Publishers, Moscow                   |
| 3. Belt Conveyors   | - CEMA Publications.                         |
|   | - Oxford University Press (1996)             |
| 4. Pneumatic and Hydraulic Conveying                        | - Williams O.A., Mercel Dekker of Solids.    |
| 5. Material Handling  | - Immer .J.R.                                |
|   | - McGraw Hill Book Company                   |
| 6. Material Handling system Design                          | - Apple                                      |
|   | - John Wiley                                 |
| 7. Material Handling Handbook                               | - H.A.Bolt., G.E. Hagmani                    |
| 8. Pneumatic Conveying of Solids                            | - Marnes, Leung                              |
|   | - Chapman & Hall                             |
| 9. Mechanical Handling of Materials                         | - T.K.Roy                                    |
|   | - Khanna Publishers                          |
| 10. Bulk Handling of Solids: Colijen                        | - Elsevier Publications.                     |
| 11. Bulk Handling of Solids                                 | - Woodcock                                   |
| 12. Materials Handling Principles and Publishers & Practice | - Theodore H.Allegri Sr. - CBS Distributors. |



## MATERIALS MANAGEMENT (Code: MTT-206)

System approach to Material Management, Types of inventory, Fundamental of Inventory Management.

The Economic Lot-size, basic concept, costs in the EOQ, quality discounts, Past period balancing, period order quantity (POQ) practical considerations.

Deterministic models and probabilistic Models: single item item single sources, Multi- source Inventory model.

Demand Management, Importance of forecast, Forecasting characteristics, Making a forecast, Forecasting Techniques.

Material control, Independent demand, Dependent demand.

Master Planning, Master production schedule (MPS), Management's role in MPS.

Aggregate Inventory Management

Capacity requirement planning.

Controlling Input.

Controlling Output.

Feedback and corrective action.

Materials Requirements Planning- advanced concepts: Just in time (JIT)

### BOOKS:

1. Manufacturing Planning and Control - Vollmann. Bery and Whybarn Systems  
- Galgotics publications, New Delhi
2. Integrated Materials Management - Plossel.

## MANAGEMENT INFORMATION SYSTEM (Code: MTI-207)

An Overview of Management Information Systems, Structure of a Management Information System, Need of MIS.

Hardware, Software and Communications Technology for Information Systems. Storage and Retrieval of Data, Transaction Processing, Office Automation and Information Processing. Data Processing Systems: The Decision Making Process, Concepts of Information, Human as Information Processors, System Concepts, Concepts of Planning and Control, Real Time Systems, Organizational Structure and Management Concepts. Case Studies.\

Supports Systems for Planning. Control and Decision Making, Support Systems for Management of Knowledge work.

Data Communication hardware, computer networks, Developing a Long Range Information System Plan, Strategies for the determination of Information Requirements, Database Requirements, User Interface Requirements.

Data sources and Data Management, Hierarchy of Data Organisation, Design & Development of Application Systems, Quality Assurance and Evaluation of Information System, Organisation and Management of the Information Resources Function, Future Developments and their Organisational and Social Implications. Elements of software Engineering- models and design issues.

### BOOKS:

1. Management Information System: - Gordon B.Davis, Margrethe H.Olson  
Conceptual Foundations, Structure and Development  
- McGraw-Hill Book Company
2. Management Information Systems - Larry Long  
- Prentice Hall Englewood Cliffs, New Jersey
3. Principles of MIS - G.M.Scott  
- McGraw Hill Publishing Company.

## HUMAN RESOURCE MANAGEMENT (Code: MTI-208)

Elements of Human Resource Management, Man environment Interaction and Acquisition of Human Resources (Human Resources Planning, Job Analysis, Selection Process etc.), Development of Human Resources, Motivation of Human Resources, 'I.S.R.' Model & Other Models, Maintenance of Human Resources.

Important Psychological and Sociological Theories in shaping individual and group behaviour and examination of determinants such as physical heredity, culture and family etc. Self-image and Psychological defenses, two person relations in organisation, obstacles to helping and collaborative relationships, work group behaviour, leadership and change in organizational setting.

Role of behavioral science in management of business enterprise, analysis of organisation as work and social system, effective management of people and business enterprise both in the private and public sectors. Technological and environment factors influencing process and problems of management form an inter disciplinary point of view.

### BOOKS:

1. Personal Human Resource Management - Devid A.DeCenzo and Stephen P. Robbins  
- Prentice Hall of India.
2. Organsiational behaviour - Fred Luthans  
- International Student Edition.

## GEOMETRIC MODELLING FOR CAD (Code: MTI-209)

### Overview of Graphic System:

Video Display Devices, Raster-Scan Systems, Random -Scan System, Hard -Copy System, Hard Copy devices, Graphics Software.

### Output Primitives

Attributes of the primitives -points, lines, circles, other curves, conic sections, Generation Algorithms of the Primitives.

### Types and Mathematical Representations of curves:

Wireframe Models, Wireframe Entities, Curve Representation, Parametric Representation of Analytic Curves, Parametric Representation of Synthetic curves, curve manipulations.

### Types and Mathematical Representations of Surfaces:

Surface Models, Surface Entities, Surface Representation, Parametric Representation of Analytic Surfaces, Parametric representation of Synthetic Surfaces, Surface Manipulation.

### Types and Mathematical Representations of Solids:

Solid Models, Solid Entities, Solid Representations, Fundamentals of solid modeling, Boundary Representation, Constructive Solid Geometry, Sweep Representation, Analytic Solid Modeling Based Applications.

### CAD CAM Data Exchange:

Evaluation of Data Exchange Format:

Shape-Based Format, Product Data- Based Format.

**IGES**- Data Representation, File Structure and Format, Processors.

**PDES**- Description, Data Representation.

### Two and Three -Dimensional Graphics Concepts:

Geometrical Transformations -Transformations of Geometrical Models, Mappings of Geometric Models, Projections of Geometric Models.

### Visual Realism

-Model clean -up, Hidden Surface Removal, Hidden Solid Removal, Shading, Coloring, User Interface for Shading and Coloring.

### BOOKS:

1. Computer Graphics
  - Donal Hearn, M.Pauline Baker
  - Prentice Hall of India.
2. CAD / CAM Theory and Practice
  - Ibrahim Zeid
  - Tata McGraw Hill Publishing Company Limited.

## **Annexure - IIIA**

PROFILE OF FACULTY MEMBERS WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED

1. Name : Dr.Siddhartha Ray
2. Date of Birth : 9<sup>th</sup> September, 1946
3. Educational Qualification : Ph.D. (Engg.)
4. Work Experience :
 

– Teaching	: 9 yrs	(Signature)
– Research	: 5yrs	
– Industry	: 30yrs	
– Others	: -----	
5. Area of Specializations : Design, Project Management, Production Engg., O.R.
6. Subject teaching at
 

Under Graduate Level	: Nil
Post Graduate Level	: 1.Operations Research; 2.Metal Cutting & Machine Tools; 3. Materials Handling; 4. Automation (partly).
7. Research guidance :
 

		<i>No of papers published in</i>	
Master's	11 nos.	National journals	6 nos.
Ph.D.	Nil	International journals	1no
		Conference: 3 international +12 national	
8. Project Carried out : Many during industrial career. A few latest ones are:
  - i) Setting up of carbonless paper plant in India & abroad,
  - ii) Setting up of a slag granulation plant
  - iii) Developing a Reel Wrapping Line for the first time in India.
9. Patents : 2nos
10. Technology Transfer : Was associated with number of Technology transfers from collaborators in the field of cold rolling mills and converting machines.
11. Research Publications: : 22 nos
12. No.of Books published with details : 7nos. (list enclosed).



## LIST OF BOOKS, MONOGRAPHS & EDITED VOLUMES

1. **Operations Research** Co-author, Monograph ME2, published by the Institution of Engineers (India), 1973
2. **Bigyaner Hazaro Prosno** Co-author, a book on Popular Science in Bengali Language, published by Model Publishing House, 1<sup>st</sup> Publication, 1982
3. **Pranijagater Hazaro Khabar** A book on popular science in the field of Animal Kingdom in Bengali language, Published by Model Publishing House, 1984
4. **Bigyankosh- 2 Volumes** Co-editor and Contributor, an Encyclopedia of Science and Technology in Bengali, published by Model Publishing House, 1985 and 1988
5. **Saral Bhouta Bigyan** A text book on Physical Science for Class VIII, approved by WBBSE; published by Model Publishing House, 1990
6. **Prathamik Prajuktividya**  
(*Basic Engineering*) A book on Basic Engineering & Technology in Bengali, published by West Bengal State Book Board, 1992
7. **Introduction to Materials Handling** ***New Age International (P) Ltd., Publishers,  
New Delhi-110 002***  
(will be published by July, 2006)

PROFILE OF FACULTY MEMBERS WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED

1. Name : Dr.Samiran Mandal
2. Date of Birth : 22<sup>nd</sup> September, 1956
3. Educational Qualification : B.E (Mech.), M.Tech,Ph.D
4. Work Experience :
  - Teaching : 16 yrs
  - Research : 1yr
  - Industry : 4yrs
  - Others : -----
5. Area of Specializations : Machine Tools, Robotics
6. Subject teaching at :
  - Under Graduate Level : Nil
  - Post Graduate Level : Welding Technology, Machine Tools, Robotics, Quality Engineering, Mechatronic System Design, Application of Mechatronic System
7. Research guidance :
  - No of papers published in*
  - |          |         |                        |        |
|----------|---------|------------------------|--------|
| Master's | 10 nos. | National journals      | 3 nos. |
| Ph.D.    | Nil     | International journals | Nil    |
|          |         | Conference             | 3 no   |
8. Project Carried out : Two projects in thrust area funded by MHRD.
9. Patents : Nil
10. Technology Transfer : Nil
11. Research Publications: : 6nos.
12. No. of Books published with details : Nil



(Signature)



**PROFILE OF FACULTY MEMBERS WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Dr.Dipankar Bose
2. Date of Birth : 18<sup>th</sup> December,1960
3. Educational Qualification : Ph.D in Engineering
4. Work Experience
  - Teaching : 22 yrs
  - Research : 2 yrs and 6 months
  - Industry : -----
  - Others : -----
5. Area of Specializations : Fluid Mechanics, Industrial Hydraulic System, Reliability Engineering
6. Subject teaching at Under Graduate Level : Engineering Mechanics, Fluid Mechanics, Workshop Technology, Control Engineering
- Post Graduate Level : Welding Technology, Reliability Engineering, Non-conventional Production Processes, Material Processing Technology, Mechatronics System Dynamics, Mechatronic System Design
7. Research guidance :  
*No of papers published in*

Master's	12 nos.	National journals	8nos.
Ph.D.	01	International journals	4nos.
	ongoing	Conference	10nos.
8. Project Carried out : 1
9. Patents : Nil
10. Technology Transfer : Nil
11. Research Publications: : Published research papers in National and international journal.
12. No. of Books published with details : Nil



(Signature)

**PROFILE OF FACULTY MEMBERS WITH QUALIFICATIONS, TOTAL EXPERIENCE, AGE AND DURATION OF EMPLOYMENT AT THE INSTITUTE CONCERNED**

1. Name : Mr.Nirmal Kumar Mandal
2. Date of Birth : 15<sup>th</sup> September,1966
3. Educational Qualification : B.E(Mech.), M.PROD.E
4. Work Experience :
  - Teaching : 18 yrs
  - Research : -----
  - Industry : -----
  - Others : -----
5. Area of Specializations : CNC Machines, CAD/CAM
6. Subject teaching at Under Graduate Level : NIL
- Post Graduate Level : Material Processing Technology, FMS and CIM
7. Research guidance :  
*No of papers published in*

Master's	7nos.	National journals	6nos.
Ph.D.	Nil	International journals	Nil
		Conference	6nos.
8. Project Carried out : 3nos. (one under MODROB and two under thrust areas funded by MHRD)
9. Patents : Nil
10. Technology Transfer : Nil
11. Research Publications: : Nil
12. No. of Books published with details : Nil



(Signature)

## **Annexure - IV**

# LIST OF APPLICANTS FOR M.TECH IN MULTIMEDIA & SOFTWARE SYSTEMS FOR THE ACADEMIC YEAR 2009-10

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
001	ATANU SARKAR	BURDWAN UNIVERSITY	MCA	COMPUTER APPLICATION	82.3	0	1	344	MARCH
002	KEYA SIL (SAHA)	DOEACC	B LEVEL		64	0	C	0	
003	KUNTALA DAS	SIKKIM MANIPAL UNIVERSITY	MCA	COMPUTER APPLICATION	71.62	0	A	0	
004	DEBAPRIYA GHOSH	WBUT	B.TECH	IT	0	7.26	1	0	
005	JOYDEEP KUNDU	WBUT	MCA	COMPUTER APPLICATION	0	8.75	1	0	
006	SUTAPA BISWAS MP CERTIFICATE, FINAL B.TECH CERTIFICATE NOT PRODUCED	WBUT	B.TECH	IT	0	8.13	1	318	MARCH
007	ANINDITA SENGUPTA	WBUT	B.TECH	IT	0	7.89	1	0	
008	MAHUYA ROY CERTIFICATES NOT PRODUCED	WBUT	B.TECH		0	7.4	1	0	
009	DIPANWITA PAUL	WBUT	B.TECH	CSE	0	8.49	1	0	
010	BIKASH CHOUDHURY B.TECH UPTO 4TH YR 1ST SEM	WBUT	B.TECH	IT	0	8.73	1	0	
011	PINAKI SANKAR CHATTERJEE	FAKIR MOHAN UNIVERSITY	BE	IT	76	0	1	0	
012	JAYASHREE PRADHAN B.TECH UPTO 7TH SEM	BPUT, ORISSA	B.TECH	CSE		7.32	1	0	
013	MEKHALA SAHA	BURDWAN UNIVERSITY	BE	IT	71.1	0	1	0	

Tuesday, November 03, 2009

Page 1 of 36

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
014	<i>SRITAMA CHAKRABORTY</i>	BURDWAN UNIVERSITY	BE	IT	74	0	1	0	
015	<i>PALLAB BISWAS</i>	BURDWAN UNIVERSITY	BE	IT	65.9	0	1	280	MARCH,
016	<i>MD. HAKDAR ALI</i> MCA PROVISIONAL CERTIFICATE PRODUCED	BIT (MESRA)	MCA	COMPUTER APPLICATION	67	0	2	0	
017	<i>PROBHUNATH ROY</i> HS CERTIFICATE NOT PRODUCED	WBUT	B.TECH	IT	0	7.72	1	0	
018	<i>SABARNA SARKAR</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.98	1	0	
019	<i>SANTOSH DAS</i>	WBUT	B.TECH	IT	0	7.89	1	0	
020	<i>SAPTARSHI ROYCHOWDHURY</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.2	1	0	
021	<i>AMAR SAHA</i>	WBUT	B.TECH	CSE	0	7.2	1	0	
022	<i>MOUSUMI MONDAL</i> MADHYAMIK CERTIFICATE NOT PRODUCED	WBUT	B.TECH	CSE	0	8.34	1	0	
023	<i>SANGEETA SEN</i>	WBUT	B.TECH	IT	0	7.57	1	0	
024	<i>TIRTHANKAR CHAKRABORTY</i>	WBUT	B.TECH	ECE	0	8.13	1	0	
025	<i>SUDIPTO CHATTOPADHYAY</i>	WBUT	MCA	COMPUTER APPLICATION	0	8.58	1	0	
026	<i>SANJIB DAS</i>	NBU	MCA	COMPUTER APPLICATION	62	0	2	0	
027	<i>PRIYANKA DAS</i>	WBUT	B.TECH	IT	0	7.95	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
028	SUTANU HALDAR	WBUT	B.TECH	CSE	0	7.37	1	0	
029	H. PARTHA SARATHI PATRA HS CERTIFICATE, MARKSHEET NOT PRODUCED	BPUT, ORISSA	BE	IT	67.23	0	1	0	
030	SUPARNA ROY B.TECH UPTO 7TH SEM	WBUT	B.TECH	ECE	0	8.7		0	
031	SREYA MUKHERJEE	WBUT	B.TECH	ECE		7.87	1	0	
032	MOONMOON SEN	MGCGV, CHITRAKOOT(MP)	B.TECH	IT		7.7	1	0	
033	SUSMITA GHOSH	WBUT	MCA	COMPUTER APPLICATION	0	8.6	1	0	
034	RITADIP MAITI	WBUT	B.TECH	CSE	0	8.44	1	0	
035	ARITRA GHOSH B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.9	1	0	
036	SOUMI MANNA	WBUT	B.TECH	CSE	0	8.02	1	0	
037	MALABIKA ROY	BURDWAN UNIVERSITY	B.E.	CSE	71.9		1	0	
038	ASHISH BHATTACHARYA MCA FINAL RESULT AWAITED	WBUT	MCA	COMPUTER APPLICATION	0	7.5	1	351	MARCH
039	MD. SALAHUDDIN	WBUT	B.TECH	CSE	0	7.33	1	0	
040	SOURADEEP SENGUPTA	WBUT	B.TECH	IT	0	8.12	1	0	
041	SHREYA BANERJEE	WBUT	B.TECH	CSE		7.66	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
042	TANMOY HAZRA B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.67	1	0	
043	SULAVA SINGHA MAHAPATRA BE UPTO 7TH SEM	PUNE UNIVERSITY	BE	IT	66	0	1	0	
044	TAMOGHNA BISWAS	WBUT	B.TECH	IT		7	1	0	
045	DEBOSMITA MONDAL	WBUT	B.TECH	IT	0	8.05	1	0	
046	SHOWMIK BHOWMIK	WBUT	B.TECH	CSE	0	7.12	1	0	
047	SUPARNA KARMAKAR B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.81	1	0	
048	PRIYANKA RAY B.TECH FINAL MARKSHEET,CERTIFICATE NOT PRODUCED	WBUT	B.TECH	IT	0	7.2	1	0	
049	MUKTA MAJUMDER B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.19	1	255	2009
050	SRIMOYEE BHATTACHERJEE	WBUT	B.TECH	CSE	0	8.26	1	0	
051	NILANJANA DAS	WBUT	B.TECH	IT	0	7.9	1	356	MARCH
052	PARTHA PRATIM PAUL	WBUT	B.TECH	CSE	0	7.78	1	0	
053	ASMITA RAY	WBUT	B.TECH	IT		7.82	1	0	
054	BIRESWAR BASAK	NBU	MCA	COMPUTER APPLICATION	73.83	0	1	0	
055	BISWAJIT GOPE	WBUT	B.TECH	CSE	0	7.57	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
056	SAINIK KUMAR MAHATA BE UPTO 7TH SEM	NAGPUR UNIVERSITY	BE	CSE	59.52	0	2	0	
057	ARPITA DEBNATH B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE		8.06	1	0	
058	CHINMOY GHORAI B.TECH UPTO 7TH SEM AND ORTHOPAEDICALLY DISABLED PERSON	WBUT	B.TECH	CSE	0	7.95	1	372	MARCH
059	SANDIPAN BISWAS	WBUT	B.TECH	CSE	0	7.8	1	0	
060	CHITRADIP PRAMANIK B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.8	1	304	MARCH
061	PURNENDU DAS	WBUT	B.TECH	IT	0	6.8		0	
062	SAJAL MITRA DOEACC ONLY FINAL PROJECT REMAIN	DOEACC	DIPLOMA	B- LEVEL	0	0		0	
063	TAMASREE BISWAS	WBUT	B.TECH	IT		8.59	1	0	
064	SUBHASHIS OJHA	WBUT	MCA	COMPUTER APPLICATION	0	8.72	1	0	
065	ARJIT ROY	WBUT	B.TECH	CSE		8.14	1	0	
066	SUJOY HALSANA	WBUT	B.TECH	CSE	0	6.98	1	0	
067	KUHELEE ROY B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.78	1	398	MARCH
068	ANUPAM BHOWMICK	WBUT	B.TECH	IT	0	6.39	1	0	
069	MRINAL KANTI BISWAS B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.41	1	410	MARCH



<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
070	AMRITA MANNA	WBUT	B.TECH	IT	0	8.35	1	0	
071	MRIDULINA NANDI B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.27	1	439	MARCH
072	SUBHADIP DEY	WBUT	B.TECH	CSE	0	7.57	1	0	
073	PANNA LAL DEY B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.83	1	0	
074	PARTHA MAHATO B.TECJ UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.67	1	0	
075	RIMA BHOWMICK FINAL B.TECH CERTIFICATE NOT PRODUCED	WBUT	B.TECH	CSE	0	7.8	1	0	
076	SANDIP MALLICK	WBUT	B.TECH	IT	0	7.56	1	431	MARCH,
077	RUMPA MUKHERJEE	WBUT	B.TECH	ECE	0	7.56	1	0	
078	PRAGYAA DUTTA BE UPTO 7TH SEM	BURDWAN UNIVERSITY	BE	IT	73.5	0	1	0	
079	SUDESHNA MAHATA B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.05	1	406	MARCH,
080	SATABDI JANA	WBUT	B.TECH	CSE	0	8	1	0	
081	DEBASIS HAIT B.TECH UPTO 5TH SEM, HS, MADHYAMIK MARKSHEET NOT PRODUCED	CALCUTTA UNIVERSITY	B.TECH	IT	0	8.67	1	0	
082	PRITHA BISWAS MADHYAMIK, HS MARKSHEET NOT PRODUCED	WBUT	B.TECH	IT	0	7.33	1	0	
083	ANIRBAN SARDAR BE % NOT CLEAR	BURDWAN UNIVERSITY	BE	IT	64.4	0	1	174	MARCH,

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
084	<i>SOUGATA CHAKRABORTY</i> BE % NOT CLEAR	BURDWAN UNIVERSITY	BE	IT	67.6	0	1	0	
085	<i>RAM PRASAD CHAKRABORTY</i>	WBUT	B.TECH	CSE	0	7.37	1	0	
086	<i>ARINDAM ROY</i> FINAL B.TECH CERTIFICATE NOT PRODUCED	WBUT	B.TECH	CSE	0	7.7	1	360	MARCH,
087	<i>KOUSIK BISWAS</i>	WBUT	B.TECH	CSE	0	7.97	1	0	
088	<i>SOMENATH CHAKRABORTY</i>	WBUT	B.TECH	CSE	0	6.95	1	0	
089	<i>SANDIPA ROY</i> B.TECH NOT YET COMPLETED	WBUT	B.TECH		0	7.59	1	0	
090	<i>ALARI BASUMATARY</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.76	1	0	
091	<i>SHANTA MANDAL</i>	WBUT	B.TECH	IT	0	7.89	1	0	
092	<i>SUDESHNA MUKHERJEE</i>	WBUT	B.TECH	IT	0	7.57	1	0	
093	<i>BUDDHAYAN RAY</i>	WBUT	B.TECH	CSE	0	7.9	1	0	
094	<i>SRIJITA NATH</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.47	1	0	
095	<i>ARNAB CHAKRABORTY</i>	WBUT	BE	IT	0	7.34	1	0	
096	<i>TAPAN KUMAR DAS</i>	BIT (MESRA)	MCA	COMPUTER APPLICATION	79	0	1	0	
097	<i>NEHA SANA</i> B.TECH FINAL CERTIFICATE, MARKSHEET NOT PRODUCED	WBUT	B.TECH	IT	0	7.32	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
098	SOUMEN PRAKASH KABI	NIT, DURGAPUR	MCA	COMPUTER APPLICATION	0	7.7	1	0	
099	DEVRAJ BHATTACHARJEE	WBUT	B.TECH	IT	0	8.47	1	0	
100	GOURAB BADHAI	WBUT	B.TECH	CSE	0	7.73	1	0	
101	SUDESHNA PAL	WBUT	B.TECH	CSE	0	8.79	1	0	
102	ADITI PAUL	WBUT	MCA	COMPUTER APPLICATION	0	8.55	1	0	
103	MUNMUN GHARAMI	WBUT	B.TECH	CSE	0	7.21	1	0	
104	GOURAB MUKHERJEE	BURDWAN UNIVERSITY	BE	CSE	61	0	1	0	
105	JAYEETA PAL B.TECH CERTIFICATE NOT PRODUCED	WBUT	B.TECH	IT	0	8.1	1	0	
106	RANJAN CHAKRABORTY	WBUT	B.TECH	ETC	0	8.32	1	0	
107	RAJEEV CHATTERJEE	KARNATAKA UNIVERSITY	BE	COMPUTER SCIENCE	64.83	0	1	0	
108	PABITRA DAS	IGNOU	MCA	COMPUTER APPLICATION	57.56	0	2	297	15/03/2010
109	SANDIP SARKAR	WBUT	B.TECH	IT	0	8.04	1	0	
110	NANDINI GUHA NIYOGI B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.12	1	372	MARCH
111	RAJ KUMAR MONDAL	WBUT	B.TECH	CSE	0	7.82	1	0	

Tuesday, November 03, 2009

Page 8 of 36

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
112	RAJESH MUKHERJEE	WBUT	B.TECH	CSE	0	7.31	1	0	
113	MANABI DAS B.TECH UPTO 7TH SEM	KALYANI UNIVERSITY	B.TECH	IT	0	7.9		0	
114	BIJAY KUMAR MONDAL Degree B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.7		259	MARCH
115	BIPLOB MUDI	WBUT	B.TECH	IT	0	7.47	1	0	
116	ANOY CHOWDHURY	WBUT	B.TECH	CSE	0	8.02	1	0	
117	PRITAM THAKUR	WBUT	B.TECH	CSE	0	8.02	1	0	
118	GAYATREE PARBAT	WBUT	B.TECH	IT	0	8.09	1	0	
119	SATADAL CHAKRABORTY	WBUT	B.TECH	IT	0	7.72	1	0	
120	AKHILESH KUMAR YADAV	CCS UNIVERSITY, MEERUT	B.TECH	ECE	63.32	0	1	0	
121	NANDAN BANERJI	IGNOU	MCA	COMPUTER APPLICATION	63.58	0	1	0	
122	ARIJIT DAS DD NOT FOUND	WBUT	B.TECH	CSE	0	7.45	1	0	
123	KUMKUM HANSDA B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT		7.53	1	0	
124	PRATAP CHANDRA GHOSH	BURDWAN UNIVERSITY	BE	CSE	71	0	1	331	MARCH
125	SANDIP ROY	WBUT	B.TECH	IT	0	8.66	1	0	

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126	TOHIDA REHMAN B.TECH UPTO 7TH SEM & ORIGINAL GATE CERTIFICATE IS NOT PRODUCED	WBUT	B.TECH	CSE		8.2	1	305	
127	MONOJ MANDAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.37	1	166	MARCH
128	SHYAM C. J.	SRM UNIVERSITY	B.TECH	IT	0	6.9	1	354	MARCH
129	DEBJIT DAS B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT		7.4	1	0	
130	SOUMEN CHAKRABORTY	WBUT	B.TECH	ETC	0	7.7	1	0	
131	BIMAN KUNDU	WBUT	B.TECH	CSE	0	7.33	1	0	
132	DEBDUTTA BANIK	WBUT	B.TECH	EE	0	7.76	1	0	
133	AYAN PAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.96	1	0	
134	TANMOY DEY	WBUT	B.TECH	CSE	0	7.3	1	0	
135	ARNAB ROY CHOUDHURY	WBUT	B.TECH	IT	0	7.63	1	0	
136	ANIMESH KUNDU	WBUT	B.TECH	IT	0	7.23	1	0	
137	SOUMEN NANDI	NBU	MCA	COMPUTER APPLICATION	77.8	0	1	0	
138	UTTAM GANGULY	DOEACC	B LEVEL		63.28	0	1	0	
139	RAKESH CHAKRABORTY	WBUT	B.TECH	CSE		7.77	1	0	

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140	DEBABRATA ADHIKARI	WBUT	MCA	COMPUTER APPLICATION	0	8.19	1	0	
141	SATYABRATA SARKER B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.2	1	0	
142	APARAJITA BHATTACHARYYA	WBUT	B.TECH	CSE	0	8.14	1	0	
143	PRABAL KUMAR MITRA	WBUT	MCA	COMPUTER APPLICATION	0	8.39	1	0	
144	BISWAJIT MANDAL	WBUT	B.TECH	CSE	0	7.4	1	0	
145	SUSHAN CHAKRABORTY B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.67	1	351	MARCH
146	SUMAN PAL	WBUT	B.TECH	CSE	0	7.39	1	0	
147	SUMAN KARMAKAR	WBUT	B.TECH	CSE	0	7.88	1	0	
148	VARUN KUMAR OJHA	WBUT	B.TECH	CSE	0	8.32	1	0	
149	ROSHMI RAHA PHYSICALLY HANDICAPPED	WBUT	B.TECH	IT	0	7.57	1	0	
150	SOMEN DEBNATH	WBUT	B.TECH	CSE	0	7.56	1	0	
151	SANJOY SEN	WBUT	MCA	COMPUTER APPLICATION	0	8.82	1	0	
152	SMITA DAS	TRIPURA UNIVERSITY	BE	CSE	77.33	0	1	0	
153	DWIJEN RUDRAPAL	TRIPURA UNIVERSITY	BE	CSE	66	0	1	0	

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154	SUBHADIP CHAKRABORTY B.TECH RESULT AWAITED	WBUT	MCA	COMPUTER APPLICATION	0	7.41	1	0	
155	TANMAY KUMAR SAMANTA	WBUT	B.TECH	CSE	0	7.82	1	0	
156	SUROJIT GHOSH B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.49	1	0	
157	RANJAN KUMAR BARMAN B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.9	1	255	MARCH
158	SUJOY DAS MAHAPATRA	WBUT	B.TECH		0	7.73	1	0	
159	ROSITA KONTHOUJAM BE UPTO 7TH SEM	MANIPUR UNIVERSITY	BE	CSE	73	0	1	0	
160	PARTHA SARATHI MONDAL	WBUT	B.TECH	IT	0	7.02	1	393	MARCH
161	SUJIT KR. DAS	WBUT	B.TECH	IT	0	7.95	1	0	
162	SUMIT BERA	WBUT	B.TECH	CSE	0	8.85	1	0	
163	AMIT SUR	WBUT	B.TECH	IT	0	7.27	1	0	
164	SUVRADIP PAUL	WBUT	B.TECH	CSE	0	7.89	1	444	MARCH
165	ANAGHYA NANDY B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.12		0	
166	SAMIT BHANJA	THE INSTITUTION OF ENGINEERS (INDIA)	AMIE	CSE	0	7.25	1	381	MARCH
167	SUMAN KARMAKAR	WBUT	B.TECH	IT	0	7.86	1	0	

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168	SOMNATH PRAMANIK B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.09	1	230	MARCH
169	RIMPI DATTA	WBUT	B.TECH	ECE	0	7.84	1	0	
170	LOVELY CHATTERJEE B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.26	1	0	
171	DHEERAJ LAL BARUI	G G UNIVERSITY, BILASPUR	M.SC	COMPUTER SCIENCE	73.78	0	1	0	
172	TANIYA GUHA	WBUT	B.TECH	IT	7.91	0	1	0	
173	RITANJANA ADHIKARY B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.7	1	0	
174	RUDRADIP MISRA	WBUT	B.TECH	CSE	0	7.64	1	444	MARCH
175	KRISHNA CHATTERJEE DE	WBUT	MCA	COMPUTER APPLICATION	75	0	1	0	
176	ANURADHA GOSWAMI	IGNOU	MCA	COMPUTER APPLICATION	61.3	0	1	0	
177	TANUSHREE CHAKRABORTY	WBUT	B.TECH	CSE	0	8.2	1	0	
178	JAYANTA AICH	AMIE	AMIE (EQUIVALENT TO	ENGINEERING	0	8.4	1	418	15
179	RUPAMOY BHATTACHARYA B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	6.3	1	0	
180	RINKU RAKSHIT	WBUT	B.TECH	IT	0	8.07	1	0	
181	ARUNIMA MAITY	WBUT	B.TECH	CSE	0	8.59	1	0	



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182	ARINDAM MASANTA	V M UNIVERSITY	BE	CSE	72.8	0	1	0	
183	DEBJANI SARKAR B.TECH DOCUMENTS NOT PRODUCED	JNTU, KAKINADA	B.TECH	ECE	0	0		0	
184	RANAJIT MAJUMDAR	WBUT	B.TECH	CSE	0	7.31	1	0	
185	SHRUTILIPI BHATTACHARJEE B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.5	1	406	MARCH
186	MANALI CHATTERJEE	WBUT	B.TECH	CSE	0	7.95	1	0	
187	SAYANI CHANDRA B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.63	1	0	
188	ABHIK BISWAS	UNIVERSITY OF KALYANI	B.TECH	ETC	0	7.5	1	0	
189	KRISHNENDU SAHA	WBUT	MCA	COMPUTER APPLICATION	76	0	1	364	MARCH
190	RAJIB BOSE	WBUT	B.TECH	IT	0	7.7	1	372	MARCH
191	DIPALI PATTANAYAK	WBUT	B.TECH	IT	0	8.36	1	0	
192	ARPITA PAUL	WBUT	B.TECH	CSE		8.04	1	0	
193	BUDDHADEB PRADHAN B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE		8.03	1	356	MARCH
194	SOUMYA SANTA BHOWMIK B.TECH UPTO 7TH SEM.	WBUT	B.TECH	CSE	0	8.4	1	0	
195	KANCHAN ADHIKARY	WBUT	MCA	COMPUTER APPLICATION	0	8.47	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
196	MAINAK SASMAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.7	1	0	
197	GHANADIP DAS	WBUT	B.TECH	CSE	0	7.91	1	0	
198	ASIF IKBAL	BURDWAN UNIVERSITY	BE	AEIE	68.9		1	0	
199	RAJIB LOCHAN DHIBAR	WBUT	B.TECH	CSE	0	7.28	1	0	
200	PARMITA DAS MCA (UPTO 5TH SEM)	WBUT	MCA	COMPUTER APPLICATION	0	8.08	1	0	
201	SUPRIYA CHATTOPADHYAY	WBUT	B.TECH	CSE	0	8.48	1	0	
202	NABONITA BARMAN B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT		7.6	1	0	
203	NAOREM DHARMO SINGH BE UPTO 7TH SEM	MANIPUR UNIVERSITY	BE	CSE	68.48	0	1	0	
204	SOURAV SINHA	BIT (MESRA)	BE	IT	70.3	0	1	0	
205	PRASENJIT MAJI	WBUT	B.TECH	CSE	0	7.79	1	0	
206	RAJASHREE CHINEY	SIKKIM MANIPAL UNIVERSITY	MCA	COMPUTER APPLICATION	70	0	B	0	
207	RAKHI CHAKRABORTY	WBUT	B.TECH	CSE	0	7.8	1	0	
208	DEBANGAN MISRA B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.32	1	304	MARCH
209	VIKRANT SINHA	UNIVERSITY OF PUNE	BE	ELECTRONICS & TEL	57.73	0	2	0	

*Tuesday, November 03, 2009*

*Page 15 of 36*

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
210	SANTOSH CHOUHAN	BARKATULLAH VISHWAVIDYALAYA,	B.E.	IT	68.3	0	1	402	MARCH
211	RAJA BISWAS	WBUT	B.TECH	CSE	0	8.57	1	297	MARCH
212	MOUSUMI MODAK	WBUT	B.TECH	IT	0	7.69	1	0	
213	SUMAN MANDAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.99	1	356	15/03/2010
214	UTPAL DATTA	UNIVERSITY OF NORTH BENGAL	BE	ELECTRICAL ENGG.	69	0	1	0	
215	BISWARUP GHOSH	VISHA BHARATI UNIVERSITY	MCA	COMPUTER APPLICATION	77	0	1	0	
216	MANJIMA SAHA B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8		0	
217	SUNNY BISWAS	WBUT	B.TECH	CSE	0	7.61	1	0	
218	DIPAN DAS	WBUT	B.TECH	CSE		7.89	1	0	
219	RANAJIT SARKAR	WBUT	B.TECH	IT	0	7.4	1	0	
220	RAJIB KUMAR BHAKAT	WBUT	B.TECH	CSE	0	8	1	377	MARCH,
221	ARKAPRAVA MIDYA	WBUT	B.TECH	IT	0	7.8	1	356	MARCH,
222	PARTHA BISWAS	WBUT	B.TECH	CSE	0	7.71	1	0	
223	SUDIPTA MONDAL	WBUT	B.TECH	IT	0	6.78	1	293	MARCH,

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
224	CHINMOYEE MAHATA B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.55	1	393	MARCH,
225	SUNITA DAS	WBUT	B.TECH	IT	0	7.9	1	456	MARCH,
226	JAYA GHOSH	WBUT	B.TECH	IT	0	7.55	1	490	MARCH,
227	PRITHA DE	WBUT	B.TECH	IT	0	8.12	1	410	MARCH,
228	MAUMITA MAITY SC/ST/OBC CERTIFICATE NOT PRODUCED, B.TECH NOT YET COMPLETED	WBUT	B.TECH	IT	0	7.54	1	0	
229	MANGALA HALDER B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.98	1	356	MARCH,
230	SASWATI BHATTACHARYA	WBUT	B.TECH	IT	0	7.82	1	0	
231	WRITAPARNA MUKHERJEE	WBUT	B.TECH	IT	0	8.14	1	0	
232	RAJIV KUMAR RANJAN B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	8.07	1	347	MARCH,
233	PRARTHITA ROY	CALCUTTA UNIVERSITY	B.TECH	EE	73.23	0	1	0	
234	BIPLAB KANTI SEN B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.8	1	0	
235	BAPPA SARDER	BESU	BE	IT	72.1	0	1	251	MARCH,
236	ANIMESH KANJILAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.8	1	254	MARCH,
237	PURNIKA SAHA	WBUT	B.TECH	IT	0	8.15	1	0	

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238	<i>SUDIPTA NASKAR</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.4	1	169	MARCH,
239	<i>PRIYA SEN</i>	WBUT	B.TECH	IT	0	7.66	1	340	MARCH
240	<i>SIDDHARTHA DEY</i>	WBUT	B.TECH	CSE	0	7.41	1	0	
241	<i>DEBASMITA MAHALANABIS</i>	WBUT	B.TECH	ECE	0	8.02	1	0	
242	<i>LALIT PRAKASH SAXENA</i> RESULT AWAITED	BUNDELKHAND UNIVERSITY	MCA	COMPUTER APPLICATION	72	0	1	0	
243	<i>JADAV CHANDRA DAS</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.28	1	439	MARCH
244	<i>SANGEETA BHATTACHARYA</i>	WBUT	B.TECH	CSE	0	8.34	1	355	MARCH
245	<i>SHEKHAR SINGH</i> B.TECH NOT YET COMPLETED	UPTU	B.TECH	CSE	69.2	0	1	377	MARCH
246	<i>APARAJITA DATTA</i>	WBUT	B.TECH	IT	0	8.1	1	0	
247	<i>SANDIP MAL</i>	WBUT	B.TECH	CSE	0	8.05	1	0	
248	<i>ARINDAM KOTAL</i>	WBUT	B.TECH	CSE		8.04	1	0	
249	<i>KETAKI NANDI</i>	WBUT	B.TECH	IT	0	8.12	1	0	
250	<i>SAYANTI CHAKRABORTY</i> B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.76	1	0	
251	<i>MD. JAMIL AKHTAR</i>	WBUT	B.TECH	CSE		8.13	1	0	

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252	TANIMA SADHUYKHAN B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.21	1	0	
253	UPASANA MITRA	WBUT	B.TECH	IT	0	7.1	1	0	
254	SAIKAT ROY	WBUT	MCA	COMPUTER APPLICATION	0	8.58	1	406	MARCH
255	MANALI MUKHERJEE B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.12	1	0	
256	PRATYAY KUILA	WBUT	B.TECH	CSE	0	7.63	1	448	MARCH
257	RESHMI DHARA	WBUT	B.TECH	ECE	0	7.74	1	0	
258	AMRIT SADHYA	WBUT	B.TECH	IT	0	7.75	1	351	MARCH
259	PULAK HALDER	WBUT	B.TECH	CSE	0	6.75	1	289	MARCH
260	PARAMITA CHAKRABORTY B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.54	1	0	
261	SUMAN KUMAR BISWAS	WBUT	B.TECH	IT	0	7.2	1	195	MARCH
262	HRITUPARNA PAUL B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.15	1	0	
263	AMIT DAS	KALYANI UNIVERSITY	MCA	COMPUTER APPLICATION	80.2	0	1	0	
264	ANUJ BHOWMIK B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.2	1	0	
265	DWAIPAYAN CHAKRABORTY B.TECH NOT YET COMPLETED	WBUT	B.TECH	EE	0	8.17	1	0	

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266	BAISHAKHI BANERJEE B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.6	1	0	
267	R. RIJI	MS UNIVERSITY, TIRUNELVELI	BE	IT	64.46	0	1	0	
268	MITHUN BISWAS	BESU	BE	CST	60.41	0	2	0	
269	BHASKAR GOSWAMI	WBUT	B.TECH	IT	0	7.66	1	0	
270	SUJATA MALLICK	RAVENSHAW UNIVERSITY	M.SC		66	0	1	0	
271	SUMAN CHAKRABORTY B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.5	1	0	
272	SWAPAN DEBBARMA	NERIST	B.TECH	CSE	60.76	0	1	0	
273	EMILY MUKHERJEE	WBUT	B.TECH	CSE	0	8.69	1	0	
274	PRIYAJIT CHANDA	BURDWAN UNIVERSITY	BE	CSE	66	0	1	0	
275	RAJAT SHUBRA MAJUMDAR B.TECH NOT YET COMPLETED	WBUT	MCA	COMPUTER APPLICATION	0	8.02	1	0	
276	ANINDITA MUKHERJEE B.TECH UPTO 7TH SEM	KALYANI UNIVERSITY	B.TECH	IT	82.4	0	1	385	MARCH
277	AMARTYA MUKHERJEE	WBUT	B.TECH	CSE	0	8.08	1	0	
278	ASHIM GHOSH	WBUT	B.TECH	ECE	0	7.65	1	0	
279	CHITTARANJAN CHIROM B.TECH UPTO 7TH SEM Tuesday, November 03, 2009	MGRERI UNIVERSITY, TAMIL NADU	B.TECH	ECE	0	8.57	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
280	ARPAN BARIK B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.25	1	0	
281	SAMIR KUNDU	WBUT	B.TECH	IT	0	7.64		0	
282	SAGAR DEB	WBUT	B.TECH	IT	0	7.45	1	0	
283	ABHIJIT PAUL B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.89	1	0	
284	SABYASACHEE BANERJEE	WBUT	B.TECH	CSE	0	8.35	1	452	MARCH
285	NAYAN PAUL B.TECH NOT YET COMPLETED	WBUT	B.TECH	ECE	0	3.62		0	
286	DIPANKAR DHABAK	WBUT	B.TECH	CSE	0	7.5	1	0	
287	SOURAV NARAYAN MONDAL	BESU	BE	IT	72.3	0	1	0	
288	UTPAL MANDI	BESU	BE	IT	63.91	0	2	356	MARCH
289	SWARNALI SARKAR	WBUT	B.TECH	CSE	0	7.52	1	0	
290	DOLA MAJUMDAR	WBUT	B.TECH	IT	0	8.18	1	0	
291	MANOJIT CHOWDHURY B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.95	1	0	
292	BHOLA NATH GHOSH	WBUT	B.TECH	ECE		7.5	1	0	
293	ARCHITA NATH B.TECH RESULT AWAITED	WBUT	B.TECH	IT	0	7.38	1	0	



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294	<i>SUBHASISH DUTTA</i> B.TECH RESULT AWAITED	WBUT	B.TECH	IT	0	7.44	1	0	
295	<i>SUBHASHREE DAS</i>	SAMBALPUR UNIVERSITY	BE	CSE	70	0	1	0	
296	<i>RAMKRISHNA GHOSH</i>	WBUT	B.TECH	IT	0	7.3	1	0	
297	<i>SWAGATIKA SAHOO</i> RESULT AWAITED	RAVENSHAW UNIVERSITY	M.SC	ITM	64	0		0	
298	<i>AMRITA ROY CHOWDHURY</i> B.TECH UPTO 5TH SEM	WBUT	MCA	COMPUTER APPLICATION	0	8.83	1	431	MARCH
299	<i>PRAGYANSHREE SATPATHY</i> RESULT AWAITED	RAVENSHAW UNIVERSITY	M.SC	ITM	63.37	0		0	
300	<i>SOMA MAHANTA</i>	SIKKIM MANIPAL UNIVERSITY	MCA	COMPUTER APPLICATION	68	0		0	
301	<i>DEBMALYA MOITRA</i> B.TECH UPTO 7TH SEM, PHYSICALLY	WBUT	B.TECH	IT	0	7.3	1	0	
302	<i>ANJAN KUMAR PAYRA</i> B.TECH NOT YET COMPLETED	WBUT	B.TECH	IT	0	8.17	1	414	MARCH
303	<i>SAHIBUL HAQUE</i>	WBUT	B.TECH	ECE	0	7.36	1	0	
304	<i>SIDDHARTHA PRADHAN</i>	SAMBALPUR UNIVERSITY	M.SC	COMPUTER SCIENCE	69.87	0	1	0	
305	<i>ABHISEK BAKSHI</i>	WBUT	B.TECH	IT	0	8.33	1	0	
306	<i>TAMAL CHAKRABORTY</i>	WBUT	B.TECH	CSE	0	7.59	1	0	
307	<i>SOURIT MAJUMDER</i>	WBUT	B.TECH	ECE	0	7.58	1	0	

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308	PAPIA DAS	WBUT	B.TECH	CSE	0	7.43	1	0	
309	SWARUPANANDA MUKHERJEE	DOEACC	B LEVEL		64	0	C	0	
310	SUVOJEET PAL	WBUT	B.TECH	IT		8.05	1	0	
311	CHAYAN DEY	WBUT	B.TECH	EE	0	7.67	1	0	
312	ANURAG GUPTA	UPTU, LUCKNOW	MCA	COMPUTER APPLICATION	75.28	0	1	0	
313	PAPIYA CHANDRA	WBUT	B.TECH	IT	0	7.94	1	0	
314	RAGHUNATH DEY	UTKAL UNIVERSITY	B.TECH	CSE	66.7	0	1	0	
316	MANISH KUMAR	MAGADH UNIVERSITY	MCA	COMPUTER APPLICATION	75.26	0	1	0	
317	SANTOSH KUMAR SAMANTARAY	BPUT, ORISSA	MCA	COMPUTER APPLICATION	75	0	1	0	
318	DEBABANI CHOWDHURY	VIDYASAGAR UNIVERSITY	B.TECH	CSE	71.74	0	1	0	
319	AMITABHA DATTA	BURDWAN UNIVERSITY	BE	IT	73.9	0	1	389	MARCH
320	DEBASHIS PAUL	IGNOU	MCA	COMPUTER APPLICATION	54.11	0	2	0	
321	CHANCHAL BHUNIA	WBUT	B.TECH	CSE	0	7.81	1	0	
322	KOEL MAJUMDAR B.TECH UPTO 7TH SEM Tuesday, November 03, 2009	WBUT	B.TECH	CSE	0	8.1	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
323	ADITI GHOSH CHOWDHURY	VIDYASAGAR UNIVERSITY	B.TECH	CSE	74.6	0	1	0	
324	BHASKAR ROY	WBUT	B.TECH	CSE	0	7.71	1	172	MARCH
325	SHANTANU PAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.24	1	0	
326	KAUSTUV DEB	WBUT	B.TECH	CSE	0	8.39	1	0	
327	DEBASHIS KHAN B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.35	1	0	
328	PIYUSH KUMAR TIWARI	WBUT	B.TECH	CSE	0	7.12	1	398	MARCH
329	JAYANTA BHATTACHARYYA	IGNOU	MCA	COMPUTER APPLICATION	63	0	1	0	
330	INDRANI BASU	WBUT	B.TECH	ECE	0	6.99	1	0	
331	AVIJIT DAS	WBUT	B.TECH	CSE	0	8.41	1	0	
332	RIKTA ZAMINDAR	WBUT	B.TECH	ECE	0	7.88	1	0	
333	BODHISATTWA	WBUT	B.TECH	IT	0	7.52	1	0	
334	SUMAN CHATTERJEE	KALYANI UNIVERSITY	B.TECH	CSE	73.6	0	1	0	
335	JOYSANKAR SENGUPTA	WBUT	B.TECH	CSE	0	7.88	1	0	
336	SANJIB MONDAL B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.5	1	0	

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337	SANDIP KUMAR BHUNIA	WBUT	B.TECH	CSE		8.38	1	370	MARCH
338	SUJOY BISWAS	WBUT	B.TECH	IT	0	7.14	1	0	
339	AMIT HAZRA	WBUT	B.TECH	CSE	0	8.03	1	0	
340	SONALI MONDAL B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	6.99	1	0	
341	RAJEEV KUMAR	RAJASTHAN UNIVERSITY	BE	CSE	70	0	1	0	
342	BISWAJIT SEN	VT UNIVERSITY, BELGAUM	BE	CSE	59.52	0	2	0	
343	ANISH KUMAR MODAK B.TECH UPTO 5TH SEM	WBUT	MCA	COMPUTER APPLICATION	0	8.21	1	0	
344	KRUTARTHA SARATHI	UTKAL UNIVERSITY	MCA	COMPUTER APPLICATION	68	0	1	0	
345	ARUP DEBNATH B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.82	1	322	MARCH
346	SOUMITA DUTTA	WBUT	B.TECH	CSE	0	7.89	1	0	
347	PRAMIT MAZUMDAR	WBUT	B.TECH	IT		8.21	1	0	
348	SHAMAYITA MITRA B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.63	1	0	
349	DEBJIT KUMAR SINGHA	WBUT	B.TECH	IT	0	8.11	1	0	
350	MOUSUMI PAL	IGNOU	MCA	COMPUTER APPLICATION	58	0	2	0	

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351	SOMA DHAR	INSTITUTION OF ENGINEERS	AMIE	CSE		7	1	0	
352	MONAJIT DEY	UP TECHNICAL UNIVERSITY	B.TECH	CSE	70.8	0	1	0	
353	CHANDAN MAHANTY	WBUT	B.TECH	IT	0	7.4	1	381	MARCH
354	SYED SITUN RASHID	WBUT	B.TECH	ECE	0	7.64	1	448	MARCH
355	SUBRATA KUMAR MANDAL B.TECH UPTO 7TH SEM	KALYANI UNIVERSITY	B.TECH	IT	67.73	0	1	0	
356	ANUPAM SAHA B.TECH NOT YET COMPLETED	WBUT	B.E.	IT	0	8.6	1	289	MARCH
357	DEBABRATA MANDAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.39	1	326	MARCH
358	MANAS KUMAR RAY	WBUT	B.TECH	CSE	0	7.4	1	0	
359	SUMITA DAS	WBUT	B.TECH	ECE	0	8.18	1	0	
360	KUMAR GOURAB MALLIK	DOEACC	B LEVEL		74	0	B	0	
361	CHANDAN KUMAR JHA	WBUT	B.TECH	CSE	0	7.1	1	264	MARCH
362	SUDIPTA HAZRA	BURDWAN UNIVERSITY	B.E.	CSE	72	0	1	0	
363	MALANCHA KHAN	DOEACC	B LEVEL		64	0	1	0	
364	SOURAV PURAKAYASTHA B.TECH UPTO 7TH SEM, B.TECH CERTIFICATE NOT PRODUCED	PONDICHERRY UNIVERSITY	B.TECH	CSE	0	6.82	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
365	SOUMEN GHOSH	IGNOU	MCA	COMPUTER APPLICATION	56.33	0	2	0	
366	ANWESHA DE BE UPTO 7TH SEM	BURDWAN UNIVERSITY	BE	IT	89.61	0	1	0	
367	JHUMA MAZUMDER	WBUT	MCA	COMPUTER APPLICATION	0	8.32	1	0	
368	SHUVANKAR CHAKRABORTY B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE	0	7.8	1	0	
369	RAKHI CHAKRABORTY	WBUT	B.TECH	ECE	0	7.37	1	0	
370	SUDESHNA RAY	IGNOU	MCA	COMPUTER APPLICATION	56	0	2	0	
371	SANJAY BHADRA	IETE	AMIETE	ETC	61.44	0	1	0	
372	TAPALINA BHATTASALI	DOEACC	B LEVEL		74	0	1	0	
373	MOUSUMI ACHARJEE	WBUT	B.TECH	IT	0	7.99	1	0	
374	SOMNATH DE	WBUT	B.TECH	CSE	0	7.05	1	0	
375	ASIM KUMAR PANDA	KALYANI UNIVERSITY	B.TECH	IT	76.89	0	1	0	
376	ARUP SARKAR	WBUT	B.TECH	CSE	0	7.86	1	0	
377	SHILADITYA DAS SHARMA	WBUT	B.TECH	CSE	0	7.26	1	389	MARCH
378	SHIBOTOSH RAY Tuesday, November 03, 2009	WBUT Page 27 of 36	B.TECH	CSE	0	6.95	1	381	MARCH

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
379	KRUNAL NARUMALBHAI CHECKING REQD. FOR OBC CERTIFICATE	SAURASHTRA UNIVERSITY	BE	COMPUTER ENGG	64.15	0	1	0	
380	KUMARI ANJALI	IGNOU	MCA	COMPUTER APPLICATION	59	0	2	0	
381	SHAHNAWAZ SHAMS B.TECH NOT YET COMPLETED	WBUT	B.TECH	CSE		7.78	1	0	
382	RANGAN MAJUMDAR	INSTITUTION OF ENGINEERS	AMIE	COMPUTER ENGG	0	7.67	1	0	
383	SUBHADIP DAS	WBUT	B.TECH	CSE	0	7.83	1	0	
384	ROSHNEE SARKAR	WBUT	B.TECH	CSE	0	7.62	1	0	
385	CHANDAN GARAI B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.55	1	0	
386	SUCHIBROTA DUTTA	VIDYASAGAR UNIVERSITY	MCA	COMPUTER APPLICATION	78.04	0	1	0	
387	DEVENDRA MANI TRIPATHI	PUNE UNIVERSITY	BE	CSE	57	0	2	460	15
388	SUJAN MONDAL	BURDWAN UNIVERSITY	BE	ECE	68.66	0	1	0	
389	ARIJIT DAS	WBUT	B.TECH	CSE	0	7.45	1	0	
390	KRUNAL NARUMALBHAI	SAURASHTRA UNIVERSITY	BE	ENGINEERING	57.9	0	1	0	
391	AMIT MAHESHBHAI LATHIGARA	SAURASHTRA UNIVERSITY	BE	ENGINEERING	78.31	0	1	0	
392	ATYUHA PAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT		7.3	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
393	RAJMOHAN GOSWAMI 393	WBUT	MCA	COMPUTER APPLICATION	0	7.98	1	356	MARCH
394	DEBDULAL PRAMANIK	WBUT	B.TECH	ECE	0	7.8	1	0	
395	SWARUP KUMAR HAZRA	BURDWAN UNIVERSITY	BE	IT	68.05	0	1	0	
396	AMIT MAHESHBHAI LATHIGARA	SAURASHTRA UNIVERSITY	BE	ENGINEERING	78.31	0	1	0	
397	KAUSHIK GIRI MCA UPTO 3RD YEAR 1ST SEM	WBUT	MCA	COMPUTER APPLICATION	0	7.91	1	0	
398	MD. SALIM KHAN	WBUT	MCA	COMPUTER APPLICATION	0	8.62	1	0	
399	DEBALINA NANDY B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.96	1	0	
400	AKHILESH KUMAR	MAGADH UNIVERSITY	MCA	COMPUTER APPLICATION	75.87	0	1	0	
401	TANUMOY ADAK B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.7	1	318	MARCH
402	MANAS DE	WBUT	B.TECH	EE	0	7.9	1	0	
403	DONA MUKHERJEE	WBUT	B.TECH	CSE		7.4	1	0	
404	SANHITA BANERJEE	WBUT	B.TECH	CSE		7.64	1	0	
405	SUJOY SANFUI	WBUT	B.TECH	ELEC. & INST	0	7.92	1	0	
406	DISARI BHAKTA B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.75	1	0	



<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
407	CHINMAY BASAK 407	WBUT	B.TECH	CSE	0	7.78	1	247	MARCH
408	SREYA SARKAR B.TECH UPTO 7TH SEM	WBUT	B.TECH	ECE	0	7.74	1	0	
409	SUBHAJIT BANERJEE	WBUT	B.TECH	IT	0	7.28	1	0	
410	PARTHA PRATIM RAY	WBUT	B.TECH	CSE	0	8.15	1	406	15/03/2010
411	ABHIRUP SINHA B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.88	1	0	
413	ANIMESH PATRA	WBUT	B.TECH	CSE	0	7.3	1	0	
414	PHALGUNI MUKHERJEE	WBUT	B.TECH	IT	0	7.72	1	356	MARCH
415	AMIT KUMAR BISWAS	WBUT	B.TECH	CSE	0	7.34	1	0	
416	RAJIB DUTTA	WBUT	B.TECH	CSE	0	7.01	1	0	
417	SAILESH KUMAR PANDEY	WBUT	B.TECH	ETC	0	7.71	1	0	
418	TANUSHREE MITRA	WBUT	B.TECH	ECE	0	7.53	1	0	
419	MAINAK CHAKRABORTY	WBUT	B.TECH	IT	0	7.57	1	0	
420	SOUMYABRATA ROY	WBUT	B.TECH	CSE	0	6.95	1	0	
422	ANWESHA GHOSH Tuesday, November 03, 2009	WBUT Page 30 of 36	B.TECH	IT	0	8.1	1	356	MARCH

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
423	BIKASH GHOSH	WBUT	B.TECH	CSE	0	7.21	1	0	
424	SUSHANTA KUMAR DEV	WBUT	MCA	COMPUTER APPLICATION		8.35	1	0	
425	ANJAN PAL	WBUT	B.TECH	CSE	0	7.88	1	431	MARCH
426	SUBHENDU CHAKRABORTY	IGNOU	MCA	COMPUTER APPLICATION	59.17	0	2	0	
427	SUDIPTA DAS	WBUT	B.TECH	CSE	0	7.51	1	0	
428	JAYDEB MONDAL	WBUT	B.TECH	CSE	0	7.38	1	268	MARCH
429	SUJATA SUR	WBUT	B.TECH	CSE	0	7.93	1	0	
430	SOUMI SINHA (BOSE)	BURDWAN UNIVERSITY	BE	IT	69.4	0	1	0	
431	AVINABA PAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.09	1	0	
432	ABHIK SEN GUPTA	WBUT	B.TECH	IT	0	7.89	1	0	
433	NIVEDITA DAS	WBUT	B.TECH	CSE	0	7.78	1	0	
434	MIHIR MANDAL B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.83	1	385	MARCH
435	SANGEET MAHATA	WBUT	B.TECH	CSE	0	6.85	1	339	MARCH
436	ARITRA MAHAPATRA	WBUT	B.TECH	IT	0	8.02	1	423	MARCH

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
437	BISHWARUP DAS B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.58	1	0	
438	SAURABH BASU B.TECH UPTO 7TH SEM AND CERTIFICATES OF MADHYAMIK & HS ARE NOT PRODUCED.	WBUT	B.TECH	CSE	0	7.63	1	494	MARCH
439	ARUNAVA BISWAS	NBU	BE	ETC	75.5	0	1	0	
440	DHANANJOY BHAKTA	WBUT	B.TECH	CSE	0	7.44	1	264	MARCH
441	DOLAN CHAKRABORTY	NSOU	MCA	COMPUTER APPLICATION	63	0	A	0	
442	SHASWATA MONDAL	WBUT	MCA	COMPUTER APPLICATION	0	8.1	1	0	
443	SWARNALI DATTA	WBUT	B.TECH	IT	0	7.65	1	0	
444	NIVEDITA MALLICK MCA UPTO 5TH SEM	WBUT	MCA	COMPUTER APPLICATION	0	8.23	1	0	
445	TANMOY DUTTA	WBUT	MCA	COMPUTER APPLICATION	0	7.85	1	0	
446	AMRITA SOM	WBUT	B.TECH	CSE		8.57	1	431	MARCH
447	OINDRILA BANDOPADHYAY B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	8.84	1	381	15/03/2010
448	REETESH SHIVAM BE UPTO 6TH SEM	IIIT	BE	ELE	72.6	0	1	0	
449	KRISHNENDU SHIT	WBUT	B.TECH	CSE	0	7.86	1	351	MARCH
450	NAYAN MANDAL	WBUT	B.TECH	IT	0	6.96	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
451	SUBHASIS KOLEY	WBUT	B.TECH	CSE	0	7.85	1	540	MARCH
452	ARINDAM DEY EDUCATIONAL CERTIFICATES DID NOT PRODUCE EXCEPT GATE SCHORE CARD	WBUT	B.TECH		0	7.2	1	360	MARCH
453	MONAMI POLLEY	WBUT	B.TECH	CSE	0	8.55	1	0	
454	SAMIT KUMAR GHOSH	WBUT	B.TECH	IT	0	6.46	1	0	
455	SUBRATA SAHA	SMU	MCA	COMPUTER APPLICATION	72	0	1	0	
456	PURNENDU PRAKASH PUSHKAR	DR. RMLAU, FAIZABAD	B.TECH	CSE	73.4	0	1	0	
457	SUKANTA BHATTACHARYA	KALYANI UNIVERSITY	B.TECH	IT	0	7.86	1	476	15/03/2010
458	KOUSHIK NATH B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	7.61	1	0	
459	NILANJANA SUBUDDHI	WBUT	B.TECH	IT	0	8.62	1	0	
460	SK. SAIKAT RAHMAN	WBUT	B.TECH	CSE	0	7.48	1	0	
461	TAPAS MISRA	NBU	MCA	COMPUTER APPLICATION	67.8	0	1	0	
462	DEBOLINA MUKHERJEE	WBUT	B.TECH	IT	0	7.6	1	0	
463	ABHIJIT MAJUMDAR	WBUT	B.TECH	IT	0	6.73	1	0	
464	DIPAN CHANDRA	UPTU, LUCKNOW	B.TECH	ETC	0	7.4	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
465	ARINDAM BARMAN B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	6.4	1	0	
466	TANMAY GOSWAMI	BURDWAN UNIVERSITY	M.SC	COMPUTER TECHNOLOGY	74	0	1	0	
467	SURANJANA CHAKRABORTY	WBUT	B.TECH	CSE	0	7.28	1	0	
468	IPSHITA SEN B.TECH UPTO 7TH SEM	WBUT	B.TECH	IT	0	7.92	1	0	
469	DEBADYUTI PAL	WBUT	B.TECH	CSE	0	8.02	1	0	
470	SOUMIK BANERJEE	WBUT	B.TECH	CSE	0	6.52	1	0	
471	KAUSHIK BASU	WBUT	B.TECH	IT	0	7.71	1	0	
472	MANDIRA BANIK B. TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.03	1	356	MARCH
473	MOYNAK ROY CHOWDHURY	WBUT	B.TECH	CSE		8.55	1	465	15/03/2010
474	RAJNEETA MUKHERJEE	WBUT	MCA	COMPUTER APPLICATION		8.23	1	0	
475	ABHIJIT BANDYOPADHYAY	WBUT	B.TECH	IT	0	7.84	1	0	
476	ROHIT KUMAR NONIA	WBUT	B.TECH	CSE	0	7.2	1	0	
477	SOUMYO KANTI CHAKRABORTY	WBUT	B.TECH	CSE	0	7.44	1	0	
478	TANUMOY MISTRI	WBUT	B.TECH	IT	0	7.39	1	0	

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
479	SUMAN BISWAS	WBUT	B.TECH	IT	0	7.61	1	0	
480	AKASH MANDAL	WBUT	B.TECH	CSE	0	7.42	1	326	15/03/2010
481	APRATIM SARDAR	WBUT	B.TECH	IT		6.84	1	0	
482	SK. AZHARUDDIN MCA UPTO 5TH SEM	WBUT	MCA	COMPUTER APPLICATION	80	0	1	0	
483	RANJAN PAUL B.E. UPTO 7TH SEM	BESU	BE	CST	79.5	0	1	364	15/03/2010
484	ANOAR SAYED BISWAS	ICFAI	MCA	COMPUTER APPLICATION	58.22	0	2	0	
485	AYAN BANERJEE	WBUT	B.TECH	CSE	0	8.03	1	0	
486	SOURAV MANNA	WBUT	B.TECH	IT	0	7.77	1	0	
487	SUPRIYA CHAKRABORTY MCA UPTO 5TH SEM	WBUT	MCA	COMPUTER APPLICATION	83.38	0	1	0	
488	SANJAY RAM B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	8.05	1	456	15/03/2010
489	RISHI BHATNAGAR	CH. CHARAN SINGH UNIVERSITY, MEERUT	B.TECH	CSE	71.6	0	1	0	
490	DEBASMITA MUKHERJEE	IGNOU	MCA	COMPUTER APPLICATION	67.17	0	1	356	15/03/2010
491	MD. ALAMGIR KABIR B.TECH UPTO 7TH SEM	WBUT	B.TECH	CSE	0	6.78	1	0	
492	SYED MASUD SHAHRYAR	KALYANI UNIVERSITY	B.TECH	IT	75.03		1	0	

Tuesday, November 03, 2009

Page 35 of 36

<i>Sr.No</i>	<i>Name</i>	<i>Institution</i>	<i>Degree</i>	<i>Subjects</i>	<i>Marks%</i>	<i>GP</i>	<i>Div/Class</i>	<i>GTS</i>	<i>GTV</i>
493	POLEM SURJIT SINGH	MANIPUR UNIVERSITY	BE	CSE	62	0	1	0	
494	NAVNEET KUMAR	UPTU	B.TECH	CSE	61.3	0	1	317	15/03/2010
495	VINOD KUMAR MARABI	G. G. UNIVERSITY, BILASPUR, C.G.	BE	CSE	0	5.43	2	161	15/03/2010
496	SUSHIL KUMAR	UPTU	B.TECH	CSE	63.12	0	1	0	
497	DIBYA RANJAN DAS ADHIKARY MCA RESULT IS AWAITED	BPUT, ORISSA	MCA	COMPUTER APPLICATION	0	7.82	1	393	15/03/2010
498	NASRUL ALAM	WBUT	B.TECH	CSE		7.02	1	0	
499	SIDDHARTH GUPTA BE UPTO 7TH SEM	RGPV, BHOPAL	BE	IT	0	7.52	1	0	
500	GHANSHYAM SWARNKAR	BERHAMPUR UNIVERSITY, ORISSA	MCA	COMPUTER APPLICATION	72.2	0	1	0	
501	DIPAK ERIC LAKRA MCA UPTO 5TH SEM	BIT (MESRA)	MCA	COMPUTER APPLICATION	67.1	0	1	0	
502	MADHUMITA PAL	WBUT	MCA	COMPUTER APPLICATION		8.38	1	502	MARCH
503	SUJAL KUMAR MALIK	WBUT	B.TECH	CSE	0	8.19	1	0	
504	MONALISHA BHATTACHARYYA	WBUT	B.TECH	ECE	0	7.93	1	0	
505	AMIT GOYAL	GGSI UNIVERSITY, DELHI	B.TECH	IT	65	0	1	334	MARCH
506	TAPAS MANIK Tuesday, November 03, 2009	BESU, SHIBPUR Page 36 of 36	BE	CST	58.22	0	2	247	15/03/2010

# LIST OF APPLICANTS FOR M.TECH IN MECHATRONICS ENGINEERING FOR THE ACADEMIC YEAR 2009-10

**GENERAL**

## Details of Applicants for M. Tech. in Mechatronics Engineering (MCT), 2009

Sl. No.	Name / Address / Phone No.	Date of Birth & Sex	Institution, Exam & Year of passing	Marks (%) GRADE	GATE	Remarks
1.	<b>PARTHA SARATHI MANDAL</b> C/O. ANITA MANDAL JAMUNAMAYEE BALIKA VIDYALAYA PO- RANIGANJ, BURDWAN WEST BENGAL, PIN - 713347	16/06/1988 (M)	(W. B. U. T.) <b>DR. B.C. ROY ENGINEERING COLLEGE</b> B.Tech. (E. C. E.) 2009	7.35		RESULT AWAITED
2.	<b>MILAN PANJA</b> VILL. & P.O.- ULA P.S. - SANKRAIL, DIST. - HOWRAH WEST BENGAL, PIN - 711310	10/12/1985 (M)	(W. B. U. T.) <b>NETAJI SUBHASH ENGINEERING COLLEGE</b> B.Tech. (E. E.) 2008	78.1		
3.	<b>RANJAN CHAKRABORTY</b> 2/20A, ASHOKE NAGAR TOLLYGUNGE, P.O. - REGENT PARK, WEST BENGAL, KOLKATA - 700 040	05/10/1985 (M)	(W. B. U. T.) <b>FUTURE INSTITUTE OF ENG. AND MNGT.</b> B.Tech. (E. C. E.) 2007	8.32		
4.	<b>ANIRNAVA BERA</b> VILL.- RAYNAGAR (NOONGOLA) P.O. + P.S. DIAMOND HARBOUR DIST. - 24 PGS(S), W. B., PIN - 743331	24/04/1987 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B.Tech. (E. C. E.) 2009	64.88		RESULT AWAITED
5.	<b>KAUSHIK KHATUA</b> C/O. NARAYAN CH. KHATUA, LIBRARY DEPT. P.O. NORTH BENGAL UNIVERSITY DIST. - DARJEELING, WEST BENGAL PIN - 734 013	31/07/1986 (M)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT., KOLAGHAT</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	7.51		
6.	<b>RATHINDRA NATH GIRI</b> SHANKHINI APARTMENT KAMINI BLOCK : A 2ND FLOOR, HALDIA TOWNSHIP, P.O.-HALDIA TOWNSHIP, PIN - 721607	01/05/1986 (M)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT., KOLAGHAT</b> B.Tech. (ELECTRONICS & INSTRUMENTATION) 2009	6.8		RESULT AWAITED
7.	<b>DEBDUTTA BANIK</b>	10/11/1985	(W. B. U. T.)			



	C/O. ANANDA KUNDU 37J, SUREN SARKAR ROAD, KOLKATA - 700 010	(F)	<b>SILIGURI INSTITUTE OF TECHNOLOGY</b> B.Tech. (ELECTRICAL ENGINEERING) 2008	7.76	
8.	<b>ANIRBAN SARKAR</b> VILL.-KANAIPUR, P.O. DAKSHIN BASUDEVPUR DIST. - HOOGLY, PIN - 712301	22/06/1988 (M)	(W. B. U. T.) <b>MCKV INSTITUTE OF ENGINEERING</b> B.Tech. (E.C.E) 2009	8.67	RESULT AWAITED
9.	<b>PRIYANKA SARKAR</b> C/O. DEBASIS SARKAR KADAKULI BISWAS PARA, P.O. BISHNUPUR DT. BANKURA (WEST BENGAL) PIN - 722122	04/11/1986 (F)	(W. B. U. T.) <b>ASANSOL ENGINEERING COLLEGE</b> B.Tech. (E.C.E) 2009	7.59	RESULT AWAITED
10.	<b>DEVASHREE MAHATO</b> FLAT NO.- 101, DEVALAYA APPARTMENT KALI MANDIR ROAD, BURDWAN COMPOUND, RANCHI JHARKHAND - 834001	02/01/1987 (F)	<b>BIJU PATNAIK UNIVERSITY OF TECHNOLOGY</b> B.Tech. (E. & T.E) 2008	68.8	
11.	<b>SOUVIK DUTTA</b> QTRS. NO. B/216, NTPC PTS., P.O. - PUBARUN, DIST - MALDA, WEST BENGAL PIN - 732215	17/07/1987 (M)	<b>NIT DURGAPUR</b> B.Tech. (E. C. E) 2009	7.76	RESULT AWAITED
12.	<b>SUSMITA SAU</b> 41 (56/F) N.S. ROAD SHEORAPHULI, HOOGHLY WEST BENGAL, PIN - 712223	14/03/1987 (F)	(W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b> B.Tech. (E.I.E) 2008	71.9	
13.	<b>PRAVEEN CHOUDHARY</b> HOUSE NO. 1477, SECTOR-37 NOIDA, GATAM BUDD NAGAR UTTAR PRADESH, PIN - 201304	29/11/1983 (M)	<b>G.L.A. INST. OF TECH. &amp; MNGT.</b> B.Tech. (MECH. ENGG.) 2007	73.05	
14.	<b>SHARMILA MULLICK</b> 2, MALICK PARA LANE P.O. - SANTRAGACHI HOWRAH, PIN - 711104	15/10/1983 (F)	(W. B. U. T.) <b>MEGHNAD SAHA INST. OF TECH.</b> B.Tech. (ELECTRICAL ENGG.) 2007	7.87	
15.	<b>SURANJANA MUKHERJEE</b> 35B, BOSE PARA ROAD P.O. - BARISHA KOLKATA, WEST BENGAL PIN - 700008	09/09/1986 (F)	(W. B. U. T.) <b>FUTURE INST. OF ENGG. &amp; MNGT.</b> B.Tech. (ECE) 2008	78.5	
16.	<b>IMTIAZ ALAM</b> ROOM NO. E III - 10 ACADEMIC HALL OF RESIDENCE CMERI NEW COLONY, DURGAPUR, WEST BENGAL, PIN - 713209	25/05/1984 (M)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2007	74.5	

17.	<b>BANITA GANGULY (BHATTACHARYA)</b> 1, SHIBERGOLI, P.O. - HALISAHAR 24 PARGANAS (NORTH) WEST BENGAL PIN - 743134	26/02/1986 (F)	<b>VEER NARMAD SOUTH GUJRAT UNIVERSITY</b> B. E. (ELECTRICAL) 2008	61	
18.	<b>PAREKH MITHIL SATISHKUMAR</b> 78, SNEH SMRUTI SOCIETY ADAJAN PATIA, RANDER ROAD SURAT, PIN - 395009	10/08/1987 (M)	<b>SARDAR PATEL UNIVERSITY</b> B. E. (MECHATRONICS) 2008	63.81	RESULT AWAITED
19.	<b>SATARUPA CHOWDHURY</b> FLAT NO. T/5, CLUSTER - 12 PURBACHAL, SALT LAKE KOLKATA - 700097	03/01/1987 (F)	(W. B. U. T.) <b>NETAJI SUBHASH ENGG. COLLEGE</b> B.Tech. (ELECTRONICS & INSTRUMENTATION) 2008	7.85	RESULT AWAITED
20.	<b>RAHUL SAHA</b> C/O. RABI KR SAHA 58/18, S.P. MUKHERJEE ROAD BAIKUNTHAPUR POST-TRIBENI, DIST. - HOOGHLY PIN - 712503	05/02/1986 (M)	(W. B. U. T.) <b>JIS COLLEGE OF ENGG.</b> B.Tech. (ELECTRONICS & INSTRUMENTATION ENGG.) 2008	8.59	
21.	<b>ASIF IKBAL</b> C/O. ABDUL OHAB P.O. MURARAI (COLLEGE ROAD) DIST. - BIRBHUM PIN - 731219	24/05/1984 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B.E (ELECTRONICS & INSTRUMENTATION ENGG.) 2007	77.75	
22.	<b>SANTANU CHATTERJEE</b> H. NO. 1/2/11 SUKANTA SARANI SUBHASPALLY, BENACHITY DURGAPUR, PIN - 713213	01/01/1983 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B.E (ECE) 2008	56.4	
23.	<b>ADITI MITRA</b> VILL. MONIBAG, P.O. KALIYAGANJ DIST - UTTAR DINAJPUR STATE, WEST BENGAL KOLKATA - 733129	22/09/1986 (F)	(W. B. U. T.) <b>CALCUTTA INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2008	7.76	RESULT AWAITED
24.	<b>SUPARNA ROY</b> 19, TARKA SIDDHANTA LANE P.O. BALLY, DIST.- HOWRAH STATE - WEST BENGAL, KOLKATA - 711201	25/12/1987 (F)	(W. B. U. T.) <b>MCKV INSTITUTE OF ENGINEERING</b> B.Tech. (ECE) 2009	8.71	RESULT AWAITED
25.	<b>BARSHA BISWAS</b> FLAT NO. 1C/23, UTTARPARA HOUSING ESTATE, 88 B G. T. ROAD, P.O. BHADRAKALI, DIST. - HOOGHLY KOLKATA - 712232	19/04/1986 (F)	<b>UNIVERSITY OF PUNE</b> B.E. (ELECTRONICS & COMMUNICATION) 2008	65.6	
26.	<b>SANDIP DAS</b> 566/1, JAWPUR ROAD, 72/3, S.H.K.B. SARANI)	05/11/1979 (M)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (EE)	325	GATE

	DUM DUM, P.O. - MOTISHEEL KOLKATA - 74, WEST BENGAL		2008	7.41	
27.	<b>PARAMITA METIA</b> C/O. A. LAHIRI B-62, AMAL BIJOLI APPARTMENT, NARKELBAGAN, KAMDAHARI FLAT NO. 1, PIN - 700084	20/07/1983 (F)	(W. B. U. T.) <b>SAROJ MOHAN INST. OF TECHNOLOGY</b> B.Tech. (EE) 2008	7.93	
28.	<b>CHAITALI KOLEY</b> VILL. - KOROLA, P.O. DEBANANDAPUR P.S.- POLBA, DIST. - HOOGHLY WEST BENGAL PIN - 712123	02/05/1985 (F)	(W. B. U. T.) <b>MCKV INSTITUTE OF ENGINEERING</b> B.Tech. (ECE) 2009	8.09	
29.	<b>RESHMI DHARA</b> 26/1/1 HEMCHAKRA BORTY LANE KADAMTALA, HOWRAH PIN - 711101	03/06/1983 (F)	(W. B. U. T.) <b>B. P. PODDAR INST. OF MNGT. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	70	
30.	<b>BANHI SEKHA BASU</b> QTRS. NO. PHC. 121 NTPC, FARAKKA, DIST.- MURSHIDABAD P.O. - NABARUN, WEST BENGAL, PIN - 742236	21/11/1987 (F)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT.</b> B.Tech. (E. I.) 2009	72.15	RESULT AWAITED
31.	<b>ARPITA PAUL</b> 3B/4, VIVEKANANDA PARK TETIKHOLA, BDN - ARRAH, P. S. - NEW TOWNSHIP DURGAPUR - 713212	19/01/1987 (F)	<b>BENGAL INSTITUTE OF TECH. &amp; MANAGEMENT</b> B.Tech. (E. I. E.) 2008	7.97	
32.	<b>ISHITA DAS</b> 269, RABINDRA NATH TAGORE ROAD P.O. - BEDIAPARA KOLKATA - 700 077	17/10/1987 (F)	(W. B. U. T.) <b>SAROJ MOHAN INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	8.6	RESULT AWAITED
33.	<b>TAMAL DUTTA</b> VILL. - SARISHA (BOSE PARA) P.O - SARISHA, P.S. DIAMOND HARBOUR DIST. - SOUTH 24 PARGANAS PIN - 743368	05/03/1986 (M)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT.</b> B.Tech. (E E) 2009	75.7	RESULT AWAITED
34.	<b>SAMIM SULTANA</b> QT. NO. 10/11-C, I.O.C. HALDIA TOWNSHIP P.O. - HALDIA TOWNSHIP, DIST. - PURBAMEDINIPUR WEST BENGAL, PIN - 721607	06/12/1986 (F)	(W. B. U. T.) <b>HALDIA INSTITUTE OF TECHNOLOGY</b> B.Tech. (E I) 2009	7.31	RESULT AWAITED
35.	<b>SAGAR MUKHERJEE</b> 22, RAMPRASAD ROAD NABAGRAM, HOOGHLY, WEST BENGAL, PIN - 712246	07/09/1987 (M)	(W. B. U. T.) <b>MCKV INSTITUTE OF ENGINEERING</b> B.Tech. (ECE) 2009	79.4	RESULT AWAITED

36.	<b>SAYAN DEY CHAUDHURI</b> CHANDRALAYA, KEOTA TYRE BAGAN, SAHA GANJ, HOOGHLY, WEST BENGAL - 712104	07/09/1987 (M)	(W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b> B.Tech. (EIE) 2009	7.96		RESULT AWAITED
37.	<b>DEBOJYOTI GHOSH</b> STREET NO. 72, Q. NO. 3A S. P. NORTH, CHITTARANJAN DIST. - BURDWAN, WEST BENGAL PIN - 713331	29/03/1986 (M)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2007	75.9		RESULT AWAITED
38.	<b>SOMNATH BANERJEE</b> SANJAY PAL A/58, LAXIMINAGAR, LICHUBAGAN CHATACOL BUS STOP KOLKATA - 700074	16/01/1980 (M)	(W. B. U. T.) <b>KALYANI GOVT. ENGINEERING COLLEGE</b> B.Tech. (ECE) 2007	7.93	353	GATE  RESULT AWAITED
39.	<b>DEBDUT MANDAL</b> C/O. RABINDRANATH PANJA, VILL. & P.O. - ULA, P.S. - SANKRAIL, DIST. - HOWRAH, STATE - WEST BENGAL PIN - 711310	11/10/1984 (M)	(W. B. U. T.) <b>NETAJI SUBHASH ENGINEERING COLLEGE</b> B.Tech. (EE) 2008	7.98		RESULT AWAITED
40.	<b>MANALI DHAR</b>  C/O. SHYAMAL KUMAR DHAR 113/B, KANDI DANGAPARA (HOSPITAL ROAD), P.O. - KANDI P.S. - KANDI, DIST. - MURSHIDABAD PIN - 742137	25/05/1983 (F)	(W. B. U. T.) <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (E.I.E) 2007	79.1		
41.	<b>NABANITA DAS</b> VILL. DIGBARASATI POST - JHIKURIA DIST. - PASCHIM MEDINIPUR PIN - 721156	06/09/1987 (F)	(W. B. U. T.) <b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> B.Tech. (E. E.) 2009	6.96	160	GATE  RESULT AWAITED
42.	<b>SAYAN MUKHERJEE</b> PIYAL APPARTMENT FLAT NO. - 2 3, NEW SANTOSHPUR, 1ST LANE POST OFFICE - SANTOSHPUR PIN - 700075	25/09/1987 (M)	(W. B. U. T.) <b>BENGAL INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	8.25		RESULT AWAITED
43.	<b>PRAMIT MITRA</b> VILL. - LALPUR (NEAR NABARUN SAMITY - PLAY GROUND), P.O. - CHAKDAHA, DIST. - NADIA, WEST BENGAL PIN - 741222	28/04/1986 (M)	(W. B. U. T.) <b>JIS COLLEGE OF ENGINEERING</b> B.Tech. (ECE) 2007	8.3		<b>NOT ELIGIBLE</b>
44.	<b>CHITRAK DUTTA</b> NEAR BAKALI HOUSE NUTAN PARA, POST & DIST - JALPAIGURI	29/03/1986 (M)	B.Tech. (ELECTRONICS & INSTRUMENTATION)	75.2		<b>WITHOUT ENCLOSURE</b>

45.	WEST BENGAL - 735101 <b>DWAIPAYAN CHAKRABORTY</b> 60/1, 2ND FLOOR, HARI PADA DUTTA LANE, TOLLYGUNGE, KOLKATA - 700033	20/12/1987 (M)	2008 (W. B. U. T.) <b>FURUTE INSTITUTE OF ENGG. AND TECHNOLOGY</b> B.Tech. (E. E.) 2009	81.75	RESULT AWAITED
46.	<b>RANITA SEN</b> K/47 BOSE PARA KAMDAHARI GARIA, KOLKATA PIN - 700 084	08/09/1985 (F)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (E.I.E) 2008	74.1	
47.	<b>SHOHAN BANERJEE</b> P.O. - BARUIPUR, RASHMATH, RATHITALA, PURATAN BAZAR WORD NO. 06, KOLKATA - 700144	08/08/1986 (M)	(W. B. U. T.) <b>HALDIA INSTITUTE OF TECHNOLOGY</b> B.Tech. (E.I.E) 2008	68.12	
48.	<b>ARUNAVA NAG</b> 3, ASHOK MITRA ROAD KANCHRAPARA, DIST.- 24 PGS (N) WEST BENGAL, PIN - 743145	10/04/1984 (M)	(W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b> B.Tech. (E. E.) 2008	68.9	
49.	<b>CHITTARANJAN CHIROM</b> C/O. KH. ROSHAN SINGH, FLAT NO. 500 127, SECTOR B, METROPOLITAN HOUSING SOCIETY, KOLKATA - 700105	04/12/1987 (M)	<b>DR. M.G.R. EDUCATIONAL &amp; RESEARCH INSTITUTE</b> B.Tech. (ECE) 2009	57.6	RESULT AWAITED
50.	<b>MIHIR KUMAR MAHATA</b> SUDHASREE BUILDING, BIBHAR MORE, (NEAR BIBHA CINEMA HALL) 118 OLD NIMTA ROAD, BELGHORIA KOLKATA - 700056	01/02/1986 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECHN. &amp; MNGT.</b> B.Tech. (ECE) 2007	7.91	
51.	<b>SHOUBHIK SANYAL</b> 48/46A, SOUTH SINTHEE ROAD KOLKATA - 700 050.	14/02/1983 (M)	(W. B. U. T.) <b>CALCUTTA INST. OF ENGG. AND MANAGEMENT</b> B.Tech. (INSTRUMENTATION & CONTROL ENGG.)	7.33	153 GATE RESULT
52.	<b>SANTANU BAIRAGYA</b> KAJIRHAT, BOTTALA, BALIRMATH P.O.- LAKURDI, DIST. - BURDWAN WEST BENGAL, PIN - 713102	01/05/1986 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B. E. (ELECTRONICS & INSTRUMENTATION ENGG.) 2008	68.8	
53.	<b>CHANDRANI DAS</b> 12, 'ANANDAPALLY' MAHAMAYATALA P.O - GARIA, KOLKATA PIN - 700 084	24/02/1986 (F)	(W. B. U. T.) <b>DUMKAL INSTITUTE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	7.76	
54.	<b>SUBHRA CHOWDHURY</b> C/O. PRADIP KUMAR CHOWDHURY VILL.- ROY COLONY, P.O + P.S. - KALIYAGANJ	29/09/1987 (F)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	8.47	396 GATE RESULT

	DIST - UTTAR DINAJPUR, WEST BENGAL PIN - 733129					AWAITED
55.	<b>DEBABRATA BOSE</b> P.O. - DEBINAGAR, RAIGANJ DIST. NORTH DINAJPUR STATE - WEST BENGAL, PIN - 733123	24/11/1987 (M)	(W. B. U. T.) <b>SILIGURI INSTITUTE OF TECHNOLOGY</b> B. E. (ELECTRONICS & INSTRUMENTATION ENGG.) 2009	76		RESULT AWAITED
56.	<b>GUNJAN DUTTA</b> S/O. SHRI AKHIL CHANDRA DUTTA HOUSE NO. 2132, DESHBANDHUPALLY, P.O. - PURNANANDAPALLY, NAIHATI DIST, - 24 PGS , WEST BENGAL PIN - 743165	11/02/1983 (M)	(W. B. U. T.) <b>R. G. P. V</b> (MECHANICAL ENGINEERING) 2009	75.3		
57.	<b>SUPARNA MAITY</b> DHALUA, NABAPALLY (GARIA) P.O - PANCHPOTA, P.S. SONARPUR DIST - 24 PGS. (S) WEST BENGAL, PIN - 700 152	15/02/1983 (F)	(W. B. U. T.) <b>FUTURE INST. OF ENGG. AND MANAGEMENT</b> B.Tech. (E. E.) 2007	73.12		
58.	<b>ANINDYA BANERJEE</b> VILL.+ P.O. - UKHRA (CHATTERJEE PARA) DIST. - BURDWAN, P.S - ANDAL WEST BENGAL PIN - 713363	03/11/1986 (M)	(W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2009	7.31	324	GATE  RESULT AWAITED
59.	<b>RIDDHI SAMANTA</b> SHIBALAYA APARTMENT, 3RD FLOOR 15, NILGUNJ ROAD, SODEPUR, KOLKATA - 700 110	11/05/1986 (M)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	7.42		RESULT AWAITED
60.	<b>DEBASMITA MAHALANABIS</b> VILL.- RANJANPALLY P.O. - CHAKDAHA, DIST.- NADIA WEST BENGAL, PIN - 741222	01/02/1986 (M)	(W. B. U. T.) <b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2007	77.12		
61.	<b>DEBLINA BISWAS</b> C/O. DEBABRATA BISWAS, ADEN BALASORE, RLY. COLONY QRT. NO. E/12, P.O. - BALASORE, ORISSA, PIN - 756 001	16/12/1987 (F)	<b>BANKURA UNNAYANI INSTITUTE OF ENGG.</b> B.Tech. (E.I.E) 2009	77.82		RESULT AWAITED
62.	<b>ARUN KUMAR MANDAL</b> 3/2, 3RD STREET, MODERN PARK SANTOSH PUR, GROUND FLOOR KOLKATA - 700 075	23/03/1984 (M)	(W. B. U. T.) <b>KALYANI GOVT. ENGG. COLLEGE</b> B.Tech. (ECE) 2007	7.59		
63.	<b>RUDRA SANKAR GHOSH</b> R C NANDY PATH, KHARDAH, NORTH 24 PGS. (DIST) WEST BENGAL, PIN - 700 117	05/09/1983 (M)	(W. B. U. T.) <b>MCKV INSTITUTE OF ENGINEERING</b> B.Tech. (ECE) 2008	45.1		
64.	<b>SAURAV MANDAL</b> 5C, MIDDLE ROAD, SANTOSH PUR,	07/12/1984 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b>			

	JADAVPUR, KOLKATA - 700 075		B.Tech. (ECE) 2007	79.2		
65.	<b>RITUPARNA GHOSH</b> NANDAN ABASAN (NEAR JAIN HOSIERY) P.O. - HATIARA, KOLKATA - 700 157	07/12/1986 (F)	(W. B. U. T.) <b>TECHNO INDIA COLLEGE OF TECHNOLOGY</b>			RESULT
66.	<b>SAHELI SARKHEL</b> 23/1, JODHPUR GARDENS P.O. - LAKE GARDENS, KOLKATA WEST BENGAL, PIN - 700 045	29/05/1986 (F)	B.Tech. (ECE) (W. B. U. T.) <b>NETAJI SUBHAS ENGINEERING COLLEGE</b>	8.69		RESULT AWAITED
67.	<b>SUMAN BANERJEE</b> C/O. SOMENATH BANERJEE, 'MAA BHABANI BHABAN' LALKUTHI PARA, P.O.- SURI DIST.- BIRBHUM, W.B. - 731101	24/01/1986 (M)	(W. B. U. T.) <b>BIRBHUM INSTITUTE OF ENGG. &amp; TECHNOLOGY</b>	7.47		
68.	<b>ANWESHA BISWAS</b>  MEMANPUR, P.O. - V. K. PALLY KOLKATA - 700 139	26/11/1984 (F)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGINEERING &amp; TECHNOLOGY</b>	76		
69.	<b>DILIP KUMAR</b> S/O. SRI JAY SHANKAR MISHRA AT. + P.O. MADHEPUR (BRAHMSTHAN TOLA) DIST.- MADHUBANI, BIHAR, PIN - 847408	15/02/1987 (M)	B.Tech. (E.I.E) (W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b>	74.3	322	GATE
70.	<b>ABIR JYOTI MONDAL</b> QRTS. NO. B-24, N. I. T. DURGAPUR, PIN - 713209	09/06/1984 (M)	B.Tech. (E.E.) 2009 <b>THE UNIVERSITY OF BURDWAN</b>	70		
71.	<b>UTTAM BHUIN</b> VILL. - DHANYAHANA P.O.- ELAHIPUR, DIST. - HOOGHLY WEST BENGAL, PIN - 712707	02/05/1986 (M)	B. E. (ECE) (W. B. U. T.) <b>BIRBHUM INST. OF ENGG. &amp; TECHNOLOGY</b>	68.8		
72.	<b>NILADRI SEKHAR TRIPATHY</b> VILL. NETURIA P.O. - ATATTAR, DIST.- PURBA MIDNAPUR WEST BENGAL, PIN - 721633	21/04/1986 (M)	B.Tech. (ECE) 2008 <b>THE UNIVERSITY OF BURDWAN</b>	76		RESULT AWAITED
73.	<b>PRARTHITA ROY</b> 45/6, SETHBAGAN ROAD 'UTTARA' APARTMENT, FLAT NO. 15 KOLKATA - 700 030	04/12/1982 (F)	B. E. (ECE) (W. B. U. T.) <b>UNIVERSITY OF CALCUTTA</b>	73.23		
74.	<b>BANDITA SARKAR</b> "SHOHI", 110 WEST APCAR GARDEN, ASANSOL - 713305	24/11/1985 (F)	B.Tech. (E.E.) 2007 (W. B. U. T.) <b>BENGAL INSTITUTE OF TECHN. &amp; MANAGEMENT</b>	74.1		RESULT
75.	<b>S. K. MASIUL ISLAM</b> S/O. S K. SAIDUL ISLAM VILL. - RANIHATI, P.O.- PRATAPPUR, P.S. - PANSKURA, DIST.- PURBA MEDINIPUR	26/12/1984 (M)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b>	80.03		RESULT AWAITED

76.	WEST BENGAL - 721152 <b>DEBAPRIYA BHATTACHERJEE</b> C/O. ARUN KR. BHATTACHERJEE A/18, CONGRESS NAGAR (NIRANJAN PALLY) P.O. BANSDRONI, KOLKATA - 700 070	22/08/1986 (M)	(W. B. U. T.) <b>BENGAL INST. OF TECHNOLOGY &amp; MANAGEMENT</b> B.Tech. (E.I.E)	7.38	
77.	<b>SUCHANDRA ADHIKARY</b> 5/3, L RAJAMANINDRA ROAD KOLKATA - 700 037	13/09/1979 (F)	(W. B. U. T.) <b>SAROJ MOHAN INST. OF TECHNOLOGY</b> B.Tech. (ECE)	82	
78.	<b>SOUMYA BISWAS</b> 4, RASOMOY BISWAS ROAD, 1ST LANE P.O. TALAPUKUR (BARRACKPORE) KOLKATA - 700 123	25/01/1987 (M)	(W. B. U. T.) <b>FUTURE INST. OF ENGINEERING &amp; MANAGEMENT</b> B.Tech. (ECE) 2009	8.27	RESULT AWAITED
79.	<b>RITUPARNA MUKHERJEE</b> 129/1, BIRESWAR CHATTERJEE STREET CHAITALPARA, BALLY, HOWRAH PIN - 711201	07/11/1986 (F)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (EE) 2009	8.05	RESULT AWAITED
80.	<b>SAMIT KUMAR MANDAL</b> VILL. - BARBARIA (GREEN PARK) P.O. JAGANNATHPORE, DIST - NORTH 24 PARGANAS KOLKATA - 700 126	10/05/1984 (M)	(W. B. U. T.) <b>CALCUTTA INST. OF TECHNOLOGY</b> B.Tech. (ECE) 2009	7.67	RESULT AWAITED
81.	<b>KAUSHIK ROY</b> FE-521/6, SALT LAKE CITY SECTOR - III, KOLKATA - 700 106	02/10/1986 (M)	(W. B. U. T.) <b>BENGAL INSTITUTE OF TECHN. &amp; MANAGEMENT</b> B.Tech. (E.I.E)	69.9	
82.	<b>RAMTANU MUKHERJEE</b> NARUA SARKAR PARA, P.O- CHANDANNAGAR, DIST. HOOGHLY STATE - WEST BENGAL, PIN - 712136	18/05/1987 (M)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (ECE) 2009	8.05	RESULT AWAITED
83.	<b>SAIKAT ROY</b> ANAMIKA APARTMENT, 56 M. B. ROAD PURBITA, BIRATI, KOLKATA - 700 051	03/12/1987 (M)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (ECE)	72.18	RESULT
84.	<b>BIPRODIP MUKERJEE</b> SHRI LAXMI APARTMENT (D-6) 47, G.T. ROAD (EAST), MURGASOLE ASANSOLE - 3, DT. - BURDWAN STATE - WEST BENGAL - 713303	21/09/1987 (M)	(W. B. U. T.) <b>ARYABHATT INST. OF ENGG. &amp; MNGT.</b> B.Tech. (EE) 2009	8.13	RESULT AWAITED
85.	<b>SUKANTA GHOSH</b> PHULESWAR, BELTALA VILL.- BAIKUNTHAPUR, P.O. - PHULESWAR, DIST - HOWRAH STATE - WEST BENGAL - 711316	01/08/1986 (M)	(W. B. U. T.) <b>ASANSOL ENGG. COLLEGE</b> B.Tech. (ECE) 2009	71.7	
86.	<b>SRABANI JHA CHAUDHURY</b> A-1/2/8, BALAKA ABASAN	08/08/1983 (F)	(W. B. U. T.) <b>SILIGURI INSTITUTE OF TECHNOLOGY</b>		



87.	NEW TOWN, RAJARHAT KOLKATA, WEST BENGAL, PIN - 700 156 <b>DEBMALYA MOITRA</b> "MOITRA COTTAGE", S. F. ROAD P.O. - SILIGURI BAZAR DT. DARJEELING, PIN - 734005	07/11/1986 (M)	B.Tech. (ECE) 2008 (W. B. U. T.) <b>JALPAIGURI GOVT. ENGG. COLLEGE</b>	7.88		
88.	<b>ADITI CHATTERJEE</b> 1A/65 NEHERU AVENUE C-ZONE, DURGAPUR, DIST. BURDWAN PIN - 713205	13/08/1985 (F)	B.Tech. (IT) 2008 (W. B. U. T.) <b>COLLEGE OF ENGG. &amp; MNGT.</b>	73		NOT ELIGIBLE IT
89.	<b>SUSHOVAN DEY</b> 2/974, VIVEK NAGAR, JHEEL ROAD WEST BENGAL, JADAVPUR, PIN - 700075	15/06/1987 (M)	B.Tech. (ECE) 2008 (W. B. U. T.) <b>HALDIA INST. OF TECHNOLOGY</b>	7.61		
90.	<b>ANTARA GHOSH</b> 12, KHAMAR PARA KUNDU LANE P.O. - BANSBERIA, DIST. - HOOGHLY WEST BENGAL, PIN - 712502	04/04/1985 (F)	B.Tech. (EIE) (W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b>	7.76	428	GATE
91.	<b>SHUBHABRATA SARKAR</b> "SNEHALATA", FLAT NO. 2B, 6 NORTH ROAD 6 NORTH ROAD JADAVPUR, KOLKATA - 700 032	13/08/1987 (M)	B.Tech. (ECE) 2008 (W. B. U. T.) <b>FUTURE INST. OF ENGG. &amp; MANAGEMENT</b>	59.3		
92.	<b>AMIT KUMAR SAHA</b> "SNEHALATA", FLAT NO. 2B, 6 NORTH ROAD 6 NORTH ROAD JADAVPUR, KOLKATA - 700 032	18/12/1986 (M)	B.Tech. (ECE) 2009 (W. B. U. T.) <b>NETAJI SUBHAS ENGINEERING COLLEGE</b>	8.13		RESULT AWAITED
93.	<b>PRADIP SINGH</b> ROOM NO. 40, P.G. HALL NO. II (VIVEKANANDA BHAWAN) UNIVERSITY OF KALYANI KALYANI, NADIA, WEST BENGAL PIN - 741235	07/07/1987 (M)	B.Tech. (ECE) 2009 <b>UNIVERSITY OF KALYANI</b>	8.2		RESULT AWAITED
94.	<b>DEBASHRI NAYAK</b> VILL. DULALPUR, P.O. - KHALISABHANGA P.S. CONTAI, DIST. - PURBA MEDINIPUR STATE - WEST BENGAL PIN - 721433	27/12/1985 (F)	B.Tech. (EIE) 2009 (W. B. U. T.) <b>HALDIA INSTITUTE OF TECHNOLOGY</b>	59.61		
95.	<b>NIRJHAR BASU</b> C/O. MR. JAGADISH CHANDRA BASU P.O. & VILL. - SANKRAIL DIST - HOWRAH WEST BENGAL, PIN - 711313	11/01/1987 (M)	B.Tech. (ECE) 2008 (W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT., KOLAGHAT</b>	6.98		
96.	<b>AJIT PRASAD SINGH</b> S/O. RUPNARAYAN PRASAD SINGH, MAHESHMATI, TELECOM	05/03/1985 (M)	B.Tech. (EE) 2008 (W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b>	7.81		
			B.Tech. (ECE)	85.1		

	QTR NO. B/8, MALDA (WEST BENGAL) PIN - 732101		2007		
97.	<b>RIKTA ZAMINDAR</b> 16 M, FERN ROAD BALLYGUNGE, WEST BENGAL KOLKATA - 700 019	06/06/1985 (F)	(W. B. U. T.) <b>BENGAL INST. OF TECHNOLOGY &amp; MANAGEMENT</b> B.Tech. (ECE) 2007	7.88	
98.	<b>ARNIMA DAS</b> B - 1 / 32 (B) P.O. - KALYANI, DIST. - NADIA PIN - 741235	11/11/1986 (F)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (ECE) 2007	77	RESULT AWAITED
99.	<b>ARUNABHA DATTA</b>  STATION ROAD (MITRA COMPOUND) P.O - MIDNAPORE DIST - PASCHIM MEDINIPUR KOLKATA - 721101	27/08/1983 (M)	(W. B. U. T.) <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (EIE) 2007	69.4	
100.	<b>ANAMIKA CHATTOPADHYAY</b> C/O. KASHINATH BANERJEE RAJENDRA APARTMENT, 62, MOORE AVENUE, KOLKATA - 700 040	05/12/1985 (F)	<b>UNIVERSITY OF KALYANI</b> B.Tech. (EIE) 2008	85.33	
101.	<b>SWAGATA SAMANTA</b>  GARUI MANASIPARA DUM DUM CANTONMENT WEST BENGAL, KOLKATA - 700 065	29/08/1987 (F)	(W. B. U. T.) <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2009	7.73	RESULT AWAITED
102.	<b>ANTARA BHOWMICK</b> B - 7/2, RABINDRA NAGAR GOVT. HOUSING, DEBIDASTALA, G.T. ROAD, HOOGHLY. PIN - 712103	28/01/1984 (F)	(W. B. U. T.) <b>BENGAL INSTITUTE OF TECH. &amp; MANAGEMENT</b> B.Tech. (ECE) 2007	8.04	
103.	<b>RIMPI DATTA</b> C/O. SUNIL CHANDRA BHAUMIK HJ - 12, S. L. SARANI, PUNASHA APARTMENT, GOUTAM PARA, BAGUIATI, KOLKATA - 700 059	14/12/1985 (F)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2008	7.83	
104.	<b>PRANAB KARMAKAR</b> C/O. JHARNA GANGULY, AA - 7/7 DESH BANDHUNAGAR, P.O. - BAGUIATI, KOLKATA - 700 059	17/11/1986 (M)	(W. B. U. T.) <b>B. P. PODDAR INST. OF MNGT. &amp; TECHNOLOGY</b> B.Tech. (EE) 2009	7.06	RESULT AWAITED
105.	<b>SIKHARES BASAK</b> 6 /D, NALIN SARKAR STREET, HATI BAGAN, KOLKATA - 700 004	05/07/1986 (M)	(W. B. U. T.) <b>CALCUTTA INST. OF ENGG. AND MANAGEMENT</b> B.Tech. (ECE) 2008	7.52	
106.	<b>SHUBHENDU BHATTACHARYA</b> RATHER SARAK, SAMBOLA SHIBTALA	27/09/1982 (M)	(W. B. U. T.) <b>SAROJ MOHAN INSTITUTE OF TECHNOLOGY</b>		

	CHANDANNAGAR, HOOGHLY, WEST BENGAL, KOLKATA - 712136		B.Tech. (EE) 2008	74.5	
107.	<b>NISANTIKA BISWAS</b> UDITI CO-OP HOUSING, HOUSE NO - 2, PHASE - III, A - 5 KALYANI, NADIA, WEST BENGAL, KOLKATA - 741235	26/09/1985 (F)	(W. B. U. T.) <b>JALPAIGURI GOVT. ENGG. COLLEGE</b> B.Tech. (MECHANICAL ENGINEERING) 2009	7.5	RESULT AWAITED
108.	<b>NILADRI MANDAL</b> C/O. HEMANTA KUMAR MONDAL VILL - PAIKPARI, P.O. - BALLUKHAT DIST. - PURBAMEDINIPUR STATE - WEST BENGAL, PIN - 721137	27/09/1982 (M)	(W. B. U. T.) <b>SILIGURI INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2008	8.22	
109.	<b>TIRTHANKAR CHAKRABORTY</b> C/O. MAHAMAYA ROY, VIVEKANANDA SARANI, P.O. - BARABAHERA, NABAGRAM, DIST. - HOOGHLY, PIN - 712246	18/04/1985 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b> B.Tech. (ECE) 2006	81.3	
110.	<b>RAJAN GHOSH</b> 231 / 8, R. K. BANERJEE SARANI GREEN PARK, MANKUNDU, HOOGHLY, WEST BENGAL, PIN - 712139	27/12/1986 (M)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (EIE) 2008	7.29	
111.	<b>DEEPRO SEN</b> 23 / 20, EINSTEIN AVENUE, B - ZONE, DURGAPUR, WEST BENGAL, PIN - 713205	07/09/1987 (M)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ELECTRICAL & ELECTRONICS ENGINEERING) 2009	8.48	RESULT AWAITED
112.	<b>MALAY GHATA</b> 23 / 1B, MOTILAL BASAK LANE FOOL BAGAN, W. B., KOLKATA - 700 054.	17/03/1985 (M)	(W. B. U. T.) <b>NARULA INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	7.59	
113.	<b>NABIN KUMAR MONDAL</b> VILL. - SUSUNA, P.O - TARA SUSUNA P.S - MONTESWAR, DIST - BURDWAN, WEST BENGAL, PIN - 713145	21/05/1986 (M)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (EIE) 2009	71.11	RESULT AWAITED
114.	<b>MONIRUL PURKAIT</b> VILL. + P.O. - JAGODISHPUR (S) P.S. - ULUBERIA, DIST. - HOWRAH WEST BENGAL, PIN - 711315	01/05/1983 (M)	(W. B. U. T.) <b>DUMKAL INSTITUTE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (EIE) 2006	7.46	
115.	<b>KOENA MUKHERJEE</b> 'SWAPNOSRI' COLLEGE PARA RAIGANJ, UTTAR DINAJPUR WEST BENGAL, PIN - 733134	24/01/1988 (F)	(W. B. U. T.) <b>HALDIA INSTITUTE OF TECHNOLOGY</b> B.Tech. (INSTRUMENTATION & CONTROL ENGG) 2009	8.5	RESULT AWAITED
116.	<b>ANKITA DATTA</b> 75, CO-OPERATIVE COLONY BAKARO STEEL CITY, DIST. - BOKARO, JHARKHAND - 827001	18/03/1987 (F)	(W. B. U. T.) <b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> B.Tech. (EE) 2009	7.69	
117.	<b>CHAMELI SARKAR</b>	01/11/1986	(W. B. U. T.)		

	VILL. - RAGJUNATHPUR, P.O. - ANANDANAGAR, KALYANI, NADIA, W. B., PIN - 741245	(F)	<b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (EEE) 2009	7.56		RESULT AWAITED
118.	<b>SUMANI CHAKRABORTY</b> FLAT NO. - 2D, SHANTI UDYAN 547, RAJA RAM MOHAN ROY ROAD, BARISHA, KOLKATA - 700 008	25/12/1983 (F)	(W. B. U. T.) <b>ST. THOMAS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	7.56		
119.	<b>BAPPADITTYA ROY</b> JAGACHA, SANTRAGACHI, HOWRAH - 711112	23/02/1985 (M)	(W. B. U. T.) <b>BENGAL INST. OF TECHNOLOGY &amp; MANAGEMENT</b> B.Tech. (ECE)	8.07		
120.	<b>VIKASH KUMAR JHA</b> JAWAHAR HOSTEL, ROOM NO. - 60 BARKATULLAH UNIVERSITY, BHOPAL (MADHYA PRADESH), PIN - 462026	02/04/1985 (M)	<b>BARKATULLAH UNIVERSITY INSTITUTE OF TECH.</b> B. E (MECHANICAL ENGINEERING) 2009	7.16		
121.	<b>AMIT KUMAR</b> C/O. ALOK PANDEY 291/260. MALVIYA NAGAR ALLAHABAD, UTTER PRADESH, PIN - 211003	19/11/1982 (M)	<b>ALLAHABAD AGRICULTURAL INSTITUTE</b> B.Tech. (ECE) 2009	9.65	341	GATE  RESULT AWAITED
122.	<b>PRAGATA SINHA RAY</b> PADMAPUKAR, P.O. TARAKESWAR DIST. - HOGHLY, WEST BENGAL, PIN - 712410	01/02/1987 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B. E. (ECE) 2009	66.5		RESULT AWAITED
123.	<b>ARINDAM SEN</b> 11B, BRAUNFELD ROW, P.O. - ALIPORE KOLKATA - 700 027	22/12/1982 (M)	(W. B. U. T.) <b>HERITAGE INSTITUTE OF TECHNOLOGY</b> B.Tech. (EIE) 2005	71.2		
124.	<b>SUPRATIM BHATTACHARYA</b> LABU BAGAN, VIVEKANANDA SARANI P.O. - SAINTHIA, DIST. - BIRBHUM WEST BENGAL - 731234	19/06/1987 (M)	(W. B. U. T.) <b>BIRBHUM INSTITUTE OF ENGG. &amp; TECHNOLOGY</b> B. E. (ECE) 2009	7.53		RESULT AWAITED
125.	<b>AVISHEK RAY</b> 210, SUBHAS NAGAR BYE LANE P.O. - RABINDRANAGAR DUM DUM CANTONMENT KOLKATA - 700 065	02/06/1986 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B. E. (EIE) 2009	69.1		RESULT AWAITED
126.	<b>MAITREE DE</b> KUNDU PARA, UNITED CLUB ROAD, TAKI, DIST - NORTH 24 PARGANAS WEST BENGAL, PIN - 743429	27/03/1987 (F)	<b>THE UNIVERSITY OF BURDWAN</b> B. E. (ELECTRONICS & INSTRUMENTATION ENGG.) 2008	68.03		
127.	<b>SUJAN MONDAL</b> C/O. PORAM MONDAL BIJOYRAM, HARINARAYANPUR, P.O + DIST. - BURDWAN	31/10/1985 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B. E. (ECE) 2008	68.66		

128.	STATE - WEST BENGAL, PIN - 713101 <b>SASWATI KHANRA</b> C/O. TUSHAR KANTI GHOSH SAPTARSHI ROAD, FLAT NO. 300/B, ICHAPORE, STORE BAJAR, NEAR GURDWARA, DIST. - 24 PGS (NORTH) PIN - 743144	31/08/1987 (F)	(W. B. U. T.) <b>NARULA INSTITUTE OF TECHNOLOGY</b> B. E. (ECE) 2009	8.06	RESULT AWAITED
129.	<b>JAYANTA SARKAR</b> 26/1, B. T. ROAD, KOLKATA - 700 050	20/07/1984 (M)	(W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE)	7.58	
130.	<b>SHAILESH KUMAR PANDEY</b> FLAT NO. IE, SONY APARTMENT 36, K. B. SARANI, MALL ROAD, DUM DUM, KOLKATA - 700 080	07/07/1986 (M)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2008	7.71	
131.	<b>PRASHANT KUMAR</b> Q-3, VIDYASAGAR NIKETAN, SECTOR - I, SALT LAKE, BLOCK - EA, WEST BENGAL, KOLKATA - 700 064	11/11/1987 (M)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2009	7.96	
132.	<b>SAROJ KUMAR MALLICK</b> C/O. SRI SUKHOMAY BASU T- 159, SUBHAS PALLY, KAMDHAHARI, GARIA, KOLKATA - 700 084	03/01/1970 (M)	(W. B. U. T.) <b>THE INSTITUTE OF ENGINEERS (INDIA)</b> ELECTRICAL ENGINEERING 1990 AMIE	60	RESULT AWAITED
133.	<b>PRABHAT SRIVASTAVA</b> 2620 - A, H. B. C. SECTOR - 55, FARIDABAD HARYANA - 121004	12/05/1986 (M)	<b>UTTAR PRADESH TECHNICAL UNIVERSITY</b> B.Tech. (ECE) 2008	65.4	
134.	<b>DIPANJAN BHOWMIK</b> VILL. - D. C., SANKARARA P.O. - TAMLUK, DIST. - PURBA MEDINIPUR WEST BENGAL, PIN - 721636	17/07/1985 (M)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT., KOLAGHAT</b> B.Tech. (ECE) 2008	7.33	
135.	<b>JITENDRA KUMAR SINGH</b> RLY. Q NO. RT/18/J, DANGAPARA P.O. - KANCHRAPARA, DIST - N 24 PARGANAS WEST BENGAL, PIN - 743145	06/01/1987 (M)	<b>UNIVERSITY OF KALYANI</b> B.Tech. (EIE) 2009	83.03	
136.	<b>TANUSHREE MITRA</b> AJ 259, 206 BAS STOP SALT LAKE, SECTOR - II, WEST BENGAL, KOLKATA - 700 091	03/03/1987 (F)	(W. B. U. T.) <b>BIRBHUM INSTITUTE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	7.53	
137.	<b>PRATEEP SINHA</b> Q. NO. F/723, TATA BEARINGS HOUSING COMPLEX, P.O. - RAKHAJUNGLE, KHARAGPUR, WEST BENGAL, KOLKATA - 721301	02/08/1985 (M)	(W. B. U. T.) <b>ARYABHATT INST. OF ENGG. &amp; MNGT.</b> B.Tech. (EE) 2008	8.02	

138.	<b>SANJIB KUMAR KUNDU</b> 524, JAWPUR ROAD, P.O. MOTIJHEEL, P.S. - DUM DUM, KOLKATA - 700 074	10/04/1980 (M)	(W. B. U. T.) <b>NARULA INSTITUTE OF TECHNOLOGY</b> B.Tech. (EE) 2006	7.95		
139.	<b>SONU AGARWAL</b> C/O. BIJAY KUMAR AGARWAL ASHOKE PALLY, P.O. - RAIGANJ DIST. - UTTAR DINAJPUR, WEST BENGAL, PIN - 733134	22/04/1988 (M)	(W. B. U. T.) <b>SILIGURI INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	7.5	376	GATE  RESULT AWAITED
140.	<b>SOUMYADEEP PAUL</b> 12/A, GOUR BABU ROAD P.O. KANCHRAPARA, DIST.- N 24 PARGANAS WEST BENGAL, KOLKATA - 743145	07/05/1987 (M)	<b>UNIVERSITY OF KALYANI</b> B.Tech. (EIE) 2009	77.89		RESULT AWAITED
141.	<b>MOUMITA DAS</b> C/O. KRISHNA PRASAD DAS VILL. + P.O. - DAKSHIN MOYNA DIST. - PURBA MEDINAPUR WEST BENGAL, KOLKATA - 721629	17/04/1988 (F)	(W. B. U. T.) <b>NARULA INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	7.74		RESULT AWAITED
142.	<b>PRADYUMNA ROY</b> 57, SOUTH SIBACHAL, BIRATI, KOLKATA - 700 051	23/05/1983 (M)	(W. B. U. T.) <b>NARULA INSTITUTE OF TECHNOLOGY</b> B.Tech. (E . E.)	7.75		
143.	<b>SANTANU PAL</b> BELGHORIA K. P. HOUSING ESTATE QRT. NO. T - IV, 9/11 WEST BENGAL, KOLKATA - 700 056	25/01/1986 (M)	(W. B. U. T.) <b>HALDIA INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2008	7.82		
144.	<b>SUMOY MAITY</b> VILL. - SERPUR KHARKI BAR (GANDHI ROAD), P.O. CONTAL, DIST - PURBA MEDINIPUR, WEST BENGAL, KOLKATA - 721401	06/02/1983 (M)	<b>BIJU PATNAIK UNIVERSITY OF TECHNOLOGY</b> B. E. (E & TE) 2005	63		
145.	<b>SUVOJIT ACHARJEE</b> 51, GARFA SITALA MANDIR ROAD P.O. - SANTOSH PUR, KOLKATA - 700 075	16/03/1988 (M)	(W. B. U. T.) <b>FURUTE INSTITUTE OF ENGG. AND TECHNOLOGY</b> B.Tech. (ECE) 2009	7.98		RESULT AWAITED
146.	<b>PIAS SARKAR</b> 27/D. R. K. STREET UTTARPARA HOOGHLY, PIN - 712258	18/05/1987 (F)	(W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b> B.Tech. (EIE) 2009	7.91		RESULT AWAITED
147.	<b>ANWESHA CHATTERJEE</b> 3/U, GOUR SUNDER SETH LANE P.O. - SINTHEE, W. B., PIN - 700 050.	20/07/1985 (F)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (EIE)	8.16		
148.	<b>GOURAB CHAKRABORTY</b> B. C. SEN ROAD, SHAKTIPUR,	19/03/1988 (M)	(W. B. U. T.) <b>FURUTE INSTITUTE OF ENGG. AND TECHNOLOGY</b>			

	P.O. - AGARPARA, 24 PARAGANAS (N), KOLKATA - 700 109		B.Tech. (MECHANICAL) 2009	83		
149.	<b>MANASH BHATTACHARYA</b> 130/9, HRIDAYPUR PARK STATION RAOD P.O. - HRIDAYPUR, P.S. - BARASAT KOLKATA - 700127	28/11/1986 (M)	(W. B. U. T.) <b>BIRBHUM INSTITUTE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ELECTRICAL ENGG.) 2008	7.5		
150.	<b>SOUNAK DEY</b> 69A, MANSATALA LANE KHIDDERPORE, WEST BENGAL KOLKATA - 700 023	20/01/1986 (M)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (EIE) 2008	8.07		
151.	<b>KAUSIK BASU</b> C/O. PARIMAL KUMAR BASU BJ-173, SECTOR - 2, SALT LAKE, KOLKATA WEST BENGAL, PIN - 700 091	01/04/1974 (M)	(W. B. U. T.) <b>THE INSTITUTE OF ENGINEERS (INDIA)</b> AMIE IN MECHANICAL ENGG. 2006	5.96	416	GATE
152.	<b>SUMAN NIKUNJ MAHATO</b> C/O. SUVASH CHANDRA KANJI NO. 25, BHATSALA, P.O. - BRACE BRIDGE, KOLKATA, W. B., PIN - 700088.	18/08/1983 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b> B.Tech. (ELECTRICAL ENGG.) 2009	7.65	446	GATE RESULT AWAITED
153.	<b>AMIT GHOSH</b> S/O. DR. BUDDHA DEV GHOSH KANKSA MASTERPARA, P.O. PANAGARH BAZAR DIST- BURDWAN, W. B., PIN - 713148	18/01/1987 (M)	(W. B. U. T.) <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	8.08		RESULT AWAITED
154.	<b>KARTIK CHANDRA PAL</b> KANKSA MANOJ PALLY (NEAR B.D.O OFFICE) P.O. PANAGARH, DIST - BURDWAN WEST BENGAL, PIN - 713148	12/09/1985 (M)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT., KOLAGHAT</b> B.Tech. (ECE) 2009	6.74		RESULT AWAITED
155.	<b>ARUNDHUTI PAYRA</b> C/O. - ASHOK PAYRA, VILL. MONOHARCHAK, (NEAR C.T.S. GARAGE), P.O. - CONTAI, DIST - PURBA MIDNAPORE, PIN - 721401	20/01/1982 (M)	(W. B. U. T.) <b>COLLEGE OF ENGG. AND MNGT., KOLAGHAT</b> B.Tech. (EIE) 2006	7.5		
156.	<b>SUCHANDAN BOSE</b> 29-G, LAHIRI PARA LANE, CHATRA, SERAMPORE, HOOGHLY, WEST BENGAL PIN - 712 204	01/05/1984 (M)	(W. B. U. T.) <b>SAROJ MOHAN INSTITUTE OF TECHNOLOGY</b> B.Tech. (EE) 2007	7.8		
157.	<b>SABYASACHI ROY</b> 60A, RAJANI MUKHERJEE ROAD KOLKATA - 700 038	21/07/1987 (M)	(W. B. U. T.) <b>NARULA INSTITUTE OF TECHNOLOGY</b> B.Tech. (EE) (W. B. U. T.)	7.75		RESULT
158.	<b>PRIYABRATA BISWAS</b> C/O. PRASANNA KR. BISWAS VILL. - DURLAVPUR, P.O. - NADIA SUNDAL PUR P.O. - NADIA SUNDAL PUR DIST- NADIA (W.B), PIN - 741122	25/05/1986 (M)	(W. B. U. T.) <b>PT. RAVISHANKAR SHUKLA UNIVERSITY</b> M.Sc (ELECTRONICS) 2009	7.47	372	GATE <b>NOT ELIGIBLE</b> RESULT AWAITED M.SC.

159.	<b>NITISH JAIN</b> DB - 48B, RAJOURI GARDEN EXTN. HARI NAGAR, NEW DELHI, PIN - 110064	04/01/1988 (M)	(W. B. U. T.) <b>UNIVERSITY OF RAJASTHAN</b> B.E. (ECE) 2009	6.59		RESULT AWAITED
160.	<b>SAFIUR RAHAMAN</b>  VILL. - ACHHRA P.O. AMRITAKUNDA, DIST - MURSHIDABAD, PIN - 742136	03/11/1985 (M)	(W. B. U. T.) <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.E. (EIE) 2007	7.4		
161.	<b>SAPTARSI GHOSH</b> 160, MANICKTALA MAIN ROAD PURBASA, FLAT - E-8/9, WEST BENGAL, KOLKATA - 700 054	16/03/1986 (M)	(W. B. U. T.) <b>TECHNO INDIA COLLEGE OF TECHNOLOGY</b> B.Tech. (EIE) 2007	7.92		RESULT AWAITED
162.	<b>SUCHETANA BANERJEE</b> C/O. DIPAK BANERJEE SARADAPALLY, NUTANCHATI POST+DIST - BANKURA, W. B., PIN - 722101	27/08/1987 (F)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b> B.Tech. (ECE) 2009	7.08		RESULT AWAITED
163.	<b>QUAZI MD. IFTIKAR AHMED</b> VILL. - BELPARA, P.O. - DAKSHINDIHI VIA - SIAKHALA, DIST - HOOGHLY PIN - 712706	02/02/1986 (M)	(W. B. U. T.) <b>ST. THOMAS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ELECTRICAL ENGINEERING) 2007	6.71		
164.	<b>AMIT KUMAR SINGH</b> C/O. - BISHNU PADA RAY RAY MARKET, RAJBANDH, DURGAPUR STATE - WEST BENGAL, PIN - 713212	27/12/1984 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	7.75	424	GATE  RESULT AWAITED
165.	<b>SANJIB PAUL</b> 29/18 - F KENDUA MAIN ROAD, WEST BENGAL, KOLKATA - 700 084	27/09/1986 (M)	(W. B. U. T.) <b>NETAJI SUBHAS ENGINEERING COLLEGE</b> B.Tech. (ECE)	8.08		RESULT
166.	<b>ARIJIT DE</b> "ABASH" F8/A, NAYABAD AVENUE PURBASHA, RAILMATH, KOLKATA - 700 094	03/03/1988 (M)	(W. B. U. T.) <b>NETAJI SUBHAS ENGINEERING COLLEGE</b> B.Tech. (ECE) 2009	8.02		RESULT AWAITED
167.	<b>SAMIRAN BANERJEE</b> 219/A, RAILWAY QUARTER M. S. ROAD, SEALDAH, KOLKATA - 700 009	02/04/1983 (M)	(W. B. U. T.) <b>CALCUTTA INST. OF ENGG. AND MANAGEMENT</b> B.Tech. (E.E.)	7.39		
168.	<b>SWATI DEY</b> C/O. LATE TARUN KR. DEY H/59, BAISHNABGHATA PATULI TOWNSHIP KOLKATA - 700 009	26/11/1986 (F)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (EIE) 2008	7.74		
169.	<b>SYED AHMED IQBAL KHATIB</b> S/O. SYED BASHIRUDDIN KHATIB H.NO. 23-161, NEAR DENTAL COLLEGE KALLUR ROAD, TQ, HUMNABAD DIST. - BIDAR, KARNATAKA - 585330	25/10/1982 (M)	(W. B. U. T.) <b>VISVESWARAIAH TECHNOLOGICAL UNIVERSITY</b> B. E. (MECHANICAL) 2005	58		



170.	<b>MANAS DE</b> 6, NORTH ROAD, FLAT NAME - SNEHALATA FLAT NO. - 2B, JADAVPUR WEST BENGAL, KOLKATA - 700 032	17/03/1988 (M)	(W. B. U. T.) <b>FURUTE INSTITUTE OF ENGG. AND TECHNOLOGY</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	7.94	RESULT AWAITED
171.	<b>SANDIP KUMAR GUPTA</b> C/O. HIRALAL LAXMAN PRASAD K-OIL SHOP, RELLY ROAD, KALIMPONG, DIST - DARJEELING (W. B.) KOLKATA - 734301	08/08/1986 (M)	(W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ELECTRICAL ENGINEERING) 2008	8.32	
172.	<b>INDRANI BASU</b> "MAYUR APARTMENT" 4, DAKSHINPARA ROAD, FLAT - D/2 BAGUIATI, WEST BENGAL KOLKATA - 700 028	09/12/1985 (M)	(W. B. U. T.) <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	69.9	
173.	<b>SUJIT PANI</b> 294/1, GANGULY BAGAN P.O. - NAKTALA, WEST BENGAL, KOLKATA - 700 047	07/01/1967 (M)	(W. B. U. T.) <b>CALCUTTA INST. OF ENGG. AND MANAGEMENT</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	6.58	RESULT UPTO 3RD YEAR RESULT
174.	<b>SUMAN DEY</b> 27A/1, RAIPUR MANDAL PARA P.O. NAKTALA, WEST BENGAL KOLKATA - 700 047	06/06/1979 (M)	(W. B. U. T.) <b>CALCUTTA INST. OF ENGG. AND MANAGEMENT</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	70	RESULT
175.	<b>SONALIKA DUTTA</b> 116, A. T. GHOSH ROAD P.O. - GARIFA, DIST - 24 PGS (S) KOLKATA - 743166	10/06/1983 (F)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	8.04	RESULT
176.	<b>ARCHITA KANUNGO</b> 74, TARUN PALLY, DESHAPRIYA NAGAR BELGHARIA, WEST BENGAL KOLKATA - 700056	10/11/1986 (F)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	8.71	RESULT
177.	<b>DEEP MUKHERJEE</b> 67/3/2 BAJE SHIBPUR ROAD SHIBPUR, HOWRAH - 2 KOLKATA - 711102	18/09/1985 (M)	(W. B. U. T.) <b>THE UNIVERSITY OF BURDWAN</b> B.Tech. (ELECTRICAL ENGINEERING) 2008	74.5	
178.	<b>KAUSIK CHAKRABORTY</b> 140/11 CARRY ROAD, HOWRAH WEST BENGAL, PIN - 711104	03/06/1987 (M)	(W. B. U. T.) <b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE)	60.8	412 GATE
179.	<b>BIDYUT MUKHERJEE</b> C/O. B. D. GANGULY MAYUR MAHAL, P.O. - NUTAN GANJ DIST - BURDWAN, WEST BENGAL PIN - 713102	21/05/1985 (M)	(W. B. U. T.) <b>THE UNIVERSITY OF BURDWAN</b> B. E. (ECE) 2009	73.55	RESULT AWAITED

## Details of Applicants for M. Tech. in Mechatronics Engineering (MCT), 2009

Sl. No.	Name / Address / Phone No.	Date of Birth & Sex	Institution, Exam & Year of passing	Marks (%) GRADE	GATE	Remarks
1.	<b>SHINGANE PRESHIT VILASRAO</b> 12, SHRAMIK COLONY NEAR PARIJAT SOCIETY, ARNI ROAD, YAVATMAL MAHARASHTRA, PIN - 445001	08/11/1987 (M)	<b>J. D. I. E. T AMARAVATI UNIVERSITY</b> B.Tech. (MECH. ENGG.) 2009			RESULT AWITED
2.	<b>DEBASHIS RAUL</b> C/O. DEBASHIS MONDAL 2, DEBEN SEN ROAD, AGARPARA, NORTH 24 PARGANAS, PIN - 700 109	22/08/1983 (M)	(W. B. U. T.) <b>BIRBHUM INST. OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ELECTRONICS & COMMUNICATION ENGG.) 2006	7.57		
3.	<b>SUBHRAJIT DEY</b> C/O. JAYANTA KR. DAS VILL. KRISHNANAGAR (DAIBOKULI) P.O. JANGIPARA P.S. - JANGIPARA DIST. - HOOGHLY (W.B) 712404	22/05/1986 (M)	(W. B. U. T.) <b>ASANSOL ENGG. COLLEGE</b> B.Tech. (ELECTRONICS & COMMUNICATION ENGG.) 2008	7.73		
4.	<b>INDIRA MAZUMDAR</b> H-25, DUM DUM ESTATE JESSORE ROAD KOLKATA - 700 028 WEST BENGAL	10/01/1986 (F)	(W. B. U. T.) <b>DUMKAL INST. OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (EIE) 2009	7.73		RESULT AWITED
5.	<b>KAUSHIK NATH</b> KANSARIPARA, P.O. - KALNA DIST.- BURDWAN PIN - 713409	08/11/1983 (M)	(W. B. U. T.) <b>SAROJ MOHAN INST. OF TECHNOLOGY</b> B.Tech. (ELECTRONICS & COMMUNICATION ENGG.) 2008	8.34		
6.	<b>ASIT KUMAR PARIDA</b> C/O. DR. D. K. NANDA PLOT NO. 505, PART - III NAYAPALLI NUASHAI, BHUBANESWAR ORISSA - 751012	10/03/1979 (M)	<b>UTKAL UNIVERSITY</b> B.E. (ELECTRICAL) 2004	68.8		

7.	<b>ASHIM GHOSH</b> VILL.- KADIGHAT P.O. - BELBARI P.S. - GANGARAMPUR DIST. - D/DINAJPUR (W.B.) PIN - 733124	03/11/1986 (M)	(W. B. U. T.) <b>DUMKAL INST. OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	76.5	
8.	<b>MITA BISWAS</b> 30, BRAUN FELD ROW KOLKATA - 700 027	13/10/1983 (F)	<b>RANCHI UNIVERSITY</b> B.Tech. (ECE)		RESULT
9.	<b>KHOMDRAM JOLSON SINGH</b> URIPOK SORBOL THINGEN LEIRAK HAOBAM DEWAN LEIKAI, IMPHAL WEST, MANIPUR - 795001	16/03/1979 (M)	<b>V.Y.W.S COLLEGE OF ENGG.</b> B.E. (ELECTRONICS & TELECOMMUNICATION ENGG.) 2002	63.4	
10.	<b>BHARATH VASAN R</b> 4/20 SIVAN KOIL STREET VEERAPONDI (PO) THIRUKOILUR (TK) VILLUPURAM (DT) TAMIL NADU - 605758	19/04/1986 (M)	<b>SRI LAKSHMI AMMAL ENGG. COLLEGE</b> B.E. (ELECTRONICS & COMMUNICATION ENGG.) 2008	66	
11.	<b>SHRABANI DEBSHARMA</b> QTR. NO. B13/3, P.O- K.T.P.P TOWNSHIP DIST.- PURBA MEDINIPUR STATE - WEST BENGAL PIN - 721171	08/02/1988 (F)	(W. B. U. T.) <b>COLLEGE OF ENGG. &amp; MNGT. KOLAGHAT</b> B.Tech. (EE) 2009	70.4	RESULT AWITED
12.	<b>PARTHA PRATIM GHOSH</b> C.M.P.D.I R.T.-I, Q.NO. - 19A ASANSOL - 4, DIST. - BARDHAMAN WEST BENGAL, PIN - 713304	03/05/1987 (M)	(W. B. U. T.) <b>SILIGURI INST. OF TECHNOLOGY</b> B.Tech. (EI) 2009	7.1	RESULT AWITED
13.	<b>AMLAN GHOSH</b> C/O. SANDHYA GHOSH (SANDHYA NIR), SIMANTA PALLY P.O. SANTINIKETAN, DIST.- BIRBHUM, PIN - 731235	06/06/1985 (M)	(W. B. U. T.) <b>BENGAL INST. OF TECH. &amp; MANAGEMENT</b> B.Tech. (ECE) 2008	78.3	
14.	<b>RANJIT KUMAR YADAV</b> EAST KENDA COLONY P.O. - KENDA, DIST. - BURDWAN WEST BENGAL PIN - 713342	26/09/1985 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b> B.Tech. (ECE) 2007	7.76	
15.	<b>PRITHWISH MANDAL</b>	02/12/1985	(W. B. U. T.)		

	VILL. - RAHARHATI, P.O. - KHOLAPOTA DIST. - 24 PGS. (N) PIN - 743428	(M)	<b>JIS COLLEGE OF ENGG.</b> B.Tech. (EIE) 2007	7.9		
16.	<b>AKHILESH KUMAR YADAV</b> GE - 70 TRIVENIPURAM (GANGA) JHUSHI, ALLAHABAD (U.P.) PIN - 711019	12/03/1986 (M)	<b>CCS UNIVERSITY MEERUT (UP)</b> B.Tech. (ECE) 2008	63.32		
17.	<b>RAKESH KUMAR</b> HOUSE NO. 405, MAHATO NAGER, CO-OPERATIVE, TELIDIH ROAD CHAS, BOKARO, JHARKHAND PIN - 827013	16/08/1981 (M)	<b>U.P. TECHNICAL UNIVERSITY, LUCKNOW</b> B.Tech. (EI) 2007	56.32		
18.	<b>MIR FAISAL</b> C/O. SUNIT ROY, HOUSE NO. B/28 STREET NO. 3, ISPAT PALLI BIDHAN NAGAR, DURGAPUR, WEST BENGAL - 713212	27/08/1988 (M)	(W. B. U. T.) <b>BENGAL COLLEGE OF ENGG. &amp; TECH.</b> B.Tech. (ECE) 2009	376	GATE	RESULT AWAITED
19.	<b>SANTIGOPAL MAITY</b> VILL. + POST - ALANGIRI DIST. PURBA MEDINIPUR WEST BENGAL - 721420	14/10/1983 (M)	(W. B. U. T.) <b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	376	GATE	
20.	<b>DIWAKAR KUMAR</b> S/O. RAVINDRA PRASAD VILL. NAYAGOWN (BEHIND SATSANG - MANDIR), POST - JAMALPUR DIST.- MUNGER , BIHAR - 811214	15/01/1987 (M)	(W. B. U. T.) <b>MALLABHUM INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009	7.4		
21.	<b>AVIK KUNDU</b> C/O. ADITYA KUMAR KUNDU VILL + P.O. - RAJGRAM, DIST.- BANKURA, WEST BENGAL PIN - 722146	23/02/1984 (M)	(W. B. U. T.) <b>BANKURA UNNAYANI INST. OF ENGG.</b> B.Tech. (EIE) 2007	7.69		
22.	<b>SUBHANKAR MAHATO</b> P-20, PROGATI PALLY LAKE TOWN KOLKATA - 700 089	24/01/1986 (M)	(W. B. U. T.) <b>BANKURA UNNAYANI INST. OF ENGG.</b> B.Tech. (EIE) 2007	7.51		
23.	<b>SRIJA DE</b> C/O. AJIT KUMAR DE	19/05/1986 (F)	(W. B. U. T.) <b>PT. RAVISHANKAR SHUKLA UNIVERSITY</b>	325	GATE	

	VILL. GHOSHPUR, P.O. - HAUR DIST. - MIDNAPUR (EAST) PIN - 721131		M.Sc IN ELECTRONICS 2009	73		M.SC. ELECTRONICS <b>NOT</b>
24.	<b>BISHNU DEO KUMAR</b> C/O. MAHADEV DAS, WARD NO. 7 VILL- MAJERATI, P.O. JADURBERIA DIST.- HOWRAH, WEST BENGAL PIN - 711316	01/12/1986 (M)	(W. B. U. T.) <b>CALCUTTA INSTITUTE OF TECHNOLOGY</b> B.Tech. (ECE) 2009		329	GATE  RESULT AWAITED
25.	<b>ALOK KUMAR</b> RG- 17/2B, SARKARBAGAN RAGHUNATHPUR, KOLKOTA WEST BENGAL, PIN - 700 059	31/10/1985 (M)	(W. B. U. T.) <b>B.P. PODDAR INST. OF MNGT. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	7.69		
26.	<b>SUBHASH KUMAR</b> C/O. JOYDEV CHATTERJEE (HIRUDA) VILL+P.O. - RAJBANDH DURGAPUR - 12 DIST.- BURDWAN (WEST BENGAL) PIN - 713212	26/01/1988 (M)	(W. B. U. T.) <b>DURGAPUR INST. OF ADVANCE TECH. &amp; MNGT.</b> B.Tech. (EE) 2009		329	GATE  RESULT AWAITED
27.	<b>NAVEEN KUMAR</b> S/O. RAM KUMAR PRASAD, NEAR MISSION SCHOOL VILL.- BABHANE, DIST. - CHATRA STATE - JHAKHAND, PIN - 825401	08/12/1984 (M)	<b>BIJU PATNAIK UNIVERSITY OF TECH., ORISSA</b> B.Tech. (ECE) 2009		313	GATE  RESULT AWAITED
28.	<b>AMIT KUMAR</b> SEC/1-C, Q.NO - 1013 BOKARO STEEL CITY JHARKHAND, PIN - 827001	01/07/1985 (M)	<b>ALLAHABAD AGRI. CULT. INST. DEEMED UNIV.</b> B.Tech. (ECE) 2009	66.025		
29.	<b>RAHUL YADAV</b>  S/O. RADHEY SHYAM YADAV POLICE RADIO STATION, ROOM NO. 6 RAJGRAM (M.P.), DIST. RAJGRAM (M.P.) PIN - 465661	15/08/1988 (M)	<b>RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA</b> B. E. (ECE) 2008	75.92		
30.	<b>KAUSHAL KISHOR</b> C/O. PARWATI READYMADE STORE NAYA BAZAR LALGI MARKET, LAKHISARAI, BIHAR, PIN - 811311	18/12/1985 (M)	<b>ALLAHABAD AGRI. CULT. INST. DEEMED UNIV.</b> B.Tech. (ECE) 2009	82.55		
31.	<b>ASHISH GUPTA</b> H. NO. 535/27, SECTOR - B ALIGANJ FATHEPUR LUCKNOW	05/12/1985 (M)	<b>UNIVERSITY OF LUCKNOW</b> M.Sc IN ELECTRONICS			RESULT

32.	UTTER PRADESH, PIN - 226024 <b>NIKHIL GAURAV</b> C/O. PARMESHWAR PRASAD QR. NO. 1291, SECTOR - 4G, BOKARO STEEL CITY, BOKRO JHARKHAND, PIN - 827004	09/01/1986 (M)	2009 <b>ALLAHABAD AGRI. CULT. INST. DEEMED UNIV.</b> B.Tech. (ELECTRONICS & COMMUNICATION) 2009	82.55		AWAITED
33.	<b>MOUSUMI BHOWMICK</b> 86/1, SUREN SARKAR ROAD SUKANTA APARTMENT, FLAT NO. B3/2 BELIAGHATA, KOLKATA -700010	05/03/1987 (F)	<b>JIS COLLEGE OF ENGINEERING</b> B.Tech. (ELECTRICAL ENGINEERING) 2009			RESULT AWAITED
34.	<b>RAVI KUMAR</b> C/O. BISHNU PADA RAY RAY MARKET, RAJBANDH, DURGAPUR, W. B., BURDHWAN - 713212	02/02/1987 (M)	<b>DURGAPUR INST. OF ADVANCED TECH. &amp; MNGT.</b> B.Tech. (ECE) 2009		313	GATE RESULT AWAITED
35.	<b>SARAJIT SEAL</b> PLOT NO. 274, BRAJANATHCHAK P.O. - HALDIA PORT, PURBA MIDNAPORE WEST BENGAL - 721605	07/03/1985 (M)	<b>ST. THOMAS' COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2009			RESULT AWAITED

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#### Details of Applicants for M. Tech. in Mechatronics Engineering (MCT), 2009

Sl. No.	Name / Address / Phone No.	Date of Birth & Sex	Institution, Exam & Year of passing	Marks (%) GRADE	GATE	Remarks
1.	<b>ROHAN MANDAL</b> C/O. BIKASH KR. MANDAL D-32, BURDGE TOWN, PORA BANGLO ROAD, P.S. - KOTWALI, P.O.-MIDNAPUR, DIST.- PASCHIM MEDINIPUR PIN - 721101	03/08/1987 (M)	(W. B. U. T.) <b>HALDIA INSTITUTE OF TECHNOLOGY</b> B.Tech. (MECH. ENGG.) 2009	7.92		RESULT AWAITED
2.	<b>KALYAN MONDAL</b> VILL. SOUTH CHANDAMARI P.O. - NORTH CHANDAMARI	17/05/1983 (M)	(W. B. U. T.) <b>KALYANI GOVT. ENGINEERING COLLEGE</b> B.Tech. (E.C.E.)	7.41	301	GATE

3.	P.S. - KALYANI, DIST - NADIA, PIN - 741245 <b>ASHVAGHOSH BRAMHANAND WASNIK</b> ASHVAGHOSH B. WASNIK S/O. BRAMHANAND WASNIK, OLD THAORE COLONY PLOT NO. 58, JARIPATKA NAGPUR, PIN - 440014	07/11/1986 (M)	2008 <b>R.T.M. NAGPUR UNIVERSITY</b> B. E. (MECHANICAL) 2008	54.97	201	GATE	
4.	<b>SOUVIK SARKAR</b> 3/9, HOSPITAL ROAD, B-ZONE, DURGAPUR-5, DIST - BURDWAN WEST BENGAL, PIN - 713205	02/01/1987 (M)	(W. B. U. T.) <b>BIRBHUM INST. OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (E.C.E.) 2009	6.74			RESULT AWAITED
5.	<b>MITHU SHIKARE</b> 33 A/2, P. NASKAR LANE PICNIC GARDEN, KOLKATA - 700 039	13/02/1988 (F)	(W. B. U. T.) <b>HOOGHLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (ELECTRICAL ENGINEERING) 2009	8.77			RESULT AWAITED
6.	<b>KOUSIK NASKAR</b> VILL. - JHUMNIA, P.O. BHATHERIA PS. - FALTA, DIST. SOUTH 24 PARGANAS PIN - 743503	07/07/1987 (M)	(W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (E.C.E.) 2009	7.19			RESULT AWAITED
7.	<b>JAYANTA PRIYA ROY</b> VIVEKANANDA PALLY, NUTAN BAZAR (NEAR P.O. ST. THOMAS ENGLISH SCHOOL) P.O./P.S. - MAYNAGURI, DIST. - JALPAIGURI, WEST BENGAL PIN - 735224	30/04/1985 (M)	(W. B. U. T.) <b>IMPS COLLEGE OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (E.C.E.) 2009	7.54			
8.	<b>PARAMITA DAS</b> 275, ANJANGARH, P.O - SHEORAPHULI DIST.- HOOGLY, PIN - 712223	08/05/1985 (F)	(W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b> B.Tech. (E.C.E.) 2007	7.04	238	GATE	
9.	<b>PRIYANKA SAHA</b> 41/5A, J. K. MITRA ROAD BELGACHIA, WEST BENGAL KOLKATA - 700 037	22/09/1983 (F)	(W. B. U. T.) <b>TECHNO INDIA</b> B.Tech. (E.C.) 2009	7.7			RESULT AWAITED
10.	<b>SUJAN ROY</b> C/O. PRABIRESWAR GUPTA GUPTAVILLA, 19, PRATAPGAR, JADAVPUR, KOLKATA - 700 075	16/05/1984 (M)	(W. B. U. T.) <b>ACADEMY OF TECHNOLOGY</b> B.Tech. (E.I. E.) 2008	7.09			

11.	<b>BISESWAR SUTAR</b> 15/5, SREE HARI PALLY P.O. HALTU, KOLKATA - 700 078	16/01/1976 (M)	<b>JADAVPUR UNIVERSITY</b> B. E. (MECHNICAL)	64.36	
12.	<b>SURAJEET SARKAR</b> FLAT NO. 4B, SATYAM APARTMENT CIRCULAR ROAD, NABAPALLY BARASAT, KOLKATA - 700 126	17/02/1988 (M)	<b>DUMKAL INST. OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (E.C.E.) 2009	7.7	RESULT AWAITED
13.	<b>SATASRI GIRI</b> C/O. MRS. MIRA SAHA 440E, SANTASHREE PALLY, M. G. ROAD THAKUR PUKUR, PIN - 700 063.	03/11/1979 (F)	<b>BURDWAN UNIVERSITY</b> B.Tech. (E.C.) 2005	68.6	
14.	<b>PROTTAY SARKAR</b> 2/2, RAMKRISHNA GHOSH ROAD P.O. SINTHEE KOLKATA - 700 050	01/11/1984 (M)	<b>NARULA INSTITUTE OF TECHNOLOGY</b> B.Tech. (E.E.) 2005	7.9	
15.	<b>KAJAL MONDAL</b> VILL. PALPARA EAST, BANKPARA P.O. - CHAKDAHA, DIST. - NADIA WEST BENGAL - 741222	08/01/1988 (M)	<b>UNIVERSITY OF KALYANI</b> B.Tech. (E.I. E.) 2009	64.11	RESULT AWAITED
16.	<b>HIMANI ROY</b> C/O. J. C. ROY, MATRIMANDIR, M. V. ROAD, P.O. - KURSEONG DIST. - DARGELING, PIN - 734203	09/10/1985 (F)	<b>BENGAL INSTITUTE OF TECH. &amp; MNGT.</b> B.Tech. (E.C.E.) 2008	7.82	
17.	<b>DEBASHIS BISWAS</b> C/O. P. K. BISWAS MANICKPUR, THAKURPARA, P.O. - ITALGACHA, PIN - 700 079	18/01/1984 (M)	<b>SAROJ MOHAN INST. OF TECHNOLOGY</b> B.Tech. (E.C.E.) 2008	81.5	
18.	<b>RINKU HALDER</b> C/O. RABINDRA NATH HALDER SODEPUR (PALLYSREE) 316 J. C. BOSE RD. (NORTH) 24 PGS. P.O. SODEPUR STATE - WEST BENGAL, KOLKATA - 700110	30/09/1986 (F)	<b>HOOGLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (E.C.E.) 2008	80	
19.	<b>MONOTOSH GAYEN</b> RD/9A, RAGHUNATHPUR (BAGUIATI) P.O. DESHBANDHU NAGAR, 24TH PARG. (N) KOLKATA - 700 059	10/07/1985 (M)	<b>HOOGLY ENGG. &amp; TECHNOLOGY COLLEGE</b> B.Tech. (E.E.) 2008	73	
20.	<b>SINTHIA DAS</b> VILL. - 78, GOKULPUR,	25/06/1987 (F)	<b>HOOGLY ENGG. &amp; TECHNOLOGY COLLEGE</b>		



	P.O. - KATAGANJ, DIST. - NADIA P.S. - KALYANI, PIN - 741250		B.Tech. (E.C.E.) 2008	7.89		
21.	<b>SUBRATA SARKAR</b> C/O. ANIL CHANDRA SARKAR VILL. - BHAWANIPUR, P.O. - KHARAGPUR PASCHIM MIDNAPUR, PIN - 721301	23/10/1985 (M)	<b>COLLEGE OF ENGG. &amp; MNGT. KOLAGHAT</b> B.Tech. (E.C.E.) 2008	6.92	238	GATE
22.	<b>SOUMITRA SARKAR</b> S/O. SUDHANYA RANJAN SARKAR C/O. PRINCIPAL, RIPSAT (B. PHARM) COLLEGE, TYPE - III-C, ABHOYNAGAR, AGARTALA, TRIPURA (WEST) PIN - 79905	02/11/1986 (M)	<b>DR. MGR UNIVERSITY</b> B.Tech. (E.C.E.) 2008	8.22		
23.	<b>TANUSREE ROY</b> 439/5, HRIDAYPUR STATION ROAD HARI HARPUR, P.O. - HRIDAYPUR PIN - 700127	26/08/1987 (F)	(W. B. U. T.) <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECH.</b> B.Tech. (E.I. E.) 2009	8.3		
24.	<b>GANESH ROY</b> VILL. - SANKAIR, P.O. - BANIAL P.S. - TAPAN, DIST. - DAKSHIN DINAJPUR PIN - 733127	03/04/1986 (M)	<b>THE UNIVERSITY OF BURDWAN</b> B.Tech. (E.I. E.) 2008	81.1		
25.	<b>SANDIP DAS</b> C/O. SUJIT CHAKRABORTY 695, J. N. BOSE ROAD, SUBHASGRAM, NEAR SANDIPAN PATHSHALA, KOL-146	03/04/1983 (M)	<b>TRIPURA ENGINEERING COLLEGE</b> B. E. (MECHANICAL ENGINEERING) 2005	61		
26.	<b>DIBYENDU HALDER</b> N/D. - 15, JAGATPUR P.O.-GOURANGA NAGAR, WB, KOL-700 059	23/04/1984 (M)	<b>JADAVPUR UNIVERSITY</b> B. E. (MECHANICAL ENGINEERING)	66.52	264	GATE
27.	<b>BAPPA ROY</b> 1 NO. RAJA S.C. MALLICK ROAD, L-14, JADAVPUR POLICE HOUSING ESTATE, KOLKATA - 700 032	06/12/1986 (M)	(W. B. U. T.) <b>DR. B. C. ENGINEERING COLLEGE</b> B.Tech. (ELECTRICAL ENGINEERING) 2008	7.14		

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## Details of Applicants for M. Tech. in Mechatronics Engineering (MCT), 2009

Sl. No.	Name / Address / Phone No.	Date of Birth & Sex	Institution, Exam & Year of passing	Marks (%) GRADE	GATE	Remarks
1.	<b>RAMAJ SAREN</b> C/O. N. K. SAREN, SPRINGDALE, FLAT NO - 4A, 2, N. N. DUTTA ROAD, (NEAR GACHCHTALA MORE) TOLLYGUNGE, KOLKATA - 700 040	22/05/1982 (M)	<b>ANNA UNIVERSITY, CHANNAI</b> B. E. (MECHATRONICS ENGINEERING) 2009	77.5		RESULT AWAITED
2.	<b>RUPCHAND SOREN</b> C/O. S. K. DAS 219/A, MAHARANI SWARNOMOYEE ROAD KOLKATA - 700 009	03/06/1984 (M)	<b>BENGAL ENGINEERING COLLEGE</b> B.E. (ELECTRICAL ENGINEERING) 2008	57.93		
3.	<b>KAUSHIK KOIRI</b> 27/41 STHIR PARA ROAD KANKINARA, 24 PARGANAS (NORTH) WEST BENGAL PIN - 743126	25/11/1984 (M)	(W. B. U. T.) <b>KALYANI GOVT. ENGG. COLLEGE</b> B.Tech. (E.C.E.) 2008	7.84		

Sponsered
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**Details of Applicants for M. Tech. in Mechatronics Engineering (MCT), 2009**

Sl. No.	Name / Address / Phone No.	Date of Birth	Institution, Exam & Year of passing	Marks (%)	Job Experience	Sponsered
1.	<b>SOUMEN CHAKRABORTY</b> 65, SONARBANGLA D. P. NAGAR, BELGHARIA KOLKATA PIN - 700056	13/10/1985 (M)	<b>(W. B. U. T.)</b> <b>GURUNANAK INSTITUTE OF TECHNOLOGY</b> B.Tech. (E.C.E) 2008	7.77	1 YEAR FULL TIME JOB EXPERIENCE IN SUNLIT ENERGY SYSTEM.	SUNLIT ENERGY SYSTEM
2.	<b>VIVEKANANDA MUKHERJEE</b> C/O. B.N.SARKAR, 'AASTHA' PLOT NO-33, KALYANPUR HOUSING, KALYANPUR, ASANSOL, WEST BENGAL PIN - 713304	13/12/1981 (M)	<b>(W. B. U. T.)</b> <b>BENGAL UNIVERSITY OF TECHNOLOGY</b> B.Tech. (E.C.E) 2006	7.65	FROM JAN'2008 TO TILL DATE WORKING AS A LECTURER IN ASANSOL ENGINEERING COLLEGE.	ASANSOL ENGINEERING COLLEGE
3.	<b>DEBABRATA KUMAR DAS</b>  C/O. SRI SATYA CHARAN GHOSH 68, PURBA SINTHEE ROAD, DUM DUM PIN - 700030	28/05/1983 (M)	<b>(W. B. U. T.)</b> <b>MURSHIDABAD COLLEGE OF ENGG. &amp; TECH.</b> B.Tech. (E.I.E) 2007	75.3	WORKING AS A SERVICE  DELIVERY & ASSURANCE ENGINEER IN RELIANCE COMMUNICATIONS BROADBAND DEPTT. (WIRE LINE & WIRE LESS SERVICES (FROM 1ST MAY 2007 UP TO TILL DATE)	RELIANCE  COMMUNICATIONS LTD.
4.	<b>KABI GUPTA</b> C/O. KALIPRASANNA GUPTA CHANDI BERIA, SARADANAGAR (S) NEAR ANKUR CLUB P.O. SAMARPALLY (GHOSH PARA) KRISHNAPUR, KOLKATA PIN - 700 102	02/02/1979 (F)	<b>(W. B. U. T.)</b> <b>NIT, WARANGAL</b> B.Tech. (E.C.E) 2002	58.93	1.3.2003 TO 30.6.2005 IN DIATM AS LECTURER ECE, 03.1.2006 TO 28.2.2007 IN IEM AS LECTURER, 01.02.2009 ONWARDS IN DIATM	DURGAPUR INSTITUTE OF ADVANCE TECHNOLOGY & MANAGEMENT
5.	<b>KRISHNAN BANDYOPADHYAY</b> VILL. + P.O - RAMCHANDRAPUR P.S. - BAGNAN, DIST- HOWRAH WEST BENGAL PIN - 711303	04/07/1984 (M)	<b>(W. B. U. T.)</b> <b>SILIGURI INSTITUTE OF TECHNOLOGY</b> B.Tech. (E.I.E) 2007	7.56	TWO YEARS EXP. IN DUMKAL INST. OF ENGG. & TECH. AS A LECTURER IN ELECTRICAL DEPARTMENT.	DUMKAL INST. OF ENGG. AND TECH. (UNDER WBUT AICTE APPROVAL)
6.	<b>NEHUL JAGDISHCHANDRA THAKKAR</b> 5, YOGESHWAR SOCIETY -2 B/H NAGALPUR COLLEGE ROAD NAGALPUR ROAD MEHSANA, GUJRAT - 384002	15/03/1982 (M)	<b>SHRI U. V. PATEL COLLEGE OF ENGG.</b> B. E. (MECHATRONICS) 2003	70	ANNEXURE - I	U. V. PATEL COLLEGE OF ENGG., GANPAT UNIVERSITY KHERVA
7.	<b>ANKHI HAZRA</b> C/O. DR. SAMIR KUMAR HAZRA KAMALINI - FLAT NO. 1A,	29/10/1985 (F)	<b>THE UNIVERSITY OF BURDWAN</b> B.Tech. (E.C.E)	71		EXULT AGENCY PVT. LTD.

	69A, TOWN SHEND ROAD KOLKATA - 700 026		2007			
8.	<b>ASHIM GHOSH</b> VILL.- KADIGHAT P.O. - BELBARI P.S. - GANGARAMPUR DIST. - D/DINAJPUR (W.B.) PIN - 733124	03/11/1986 (M)	(W. B. U. T.) <b>DUMKAL INST. OF ENGG. &amp; TECHNOLOGY</b> B.Tech. (ECE) 2008	76.5	9 WORKED AS A FULL TIME TRAINER IN IIBM	INDIAN INST. OF BUSINESS MACHINES
9.	<b>SAI PRASAD USHA</b> C/O. JHARNA OJHA G-4/B-2, SSSIHMS, PRASANTHIGRAM, AT./P.O. PRASANTHIGRAM DIST. - ANUTHPUR, A.P. PIN - 515134	01/02/1983 (M)	<b>IIER, BHUBANESWAR UTKAL UNIVERSITY</b> B. E. (MECHANICAL) 2004	71.58	WORKING AS A GRADUATE ENGINEER UNDER DILIP KUMAR CHATTERJEE OF P.W.D. & P. W. (ROADS) FOR MAINTENANCE WORK.	DILIP KUMAR CHATTERJEE OF P.W.D. & P. W. (ROADS)
10.	<b>ADITI MANDAL</b> VILL. + P.O - JAMNA P.O. - PINGLA, DIST. - PASCHIM MEDINIPURE (WEST BENGAL) PIN - 721140	29/10/1984 (F)	(W. B. U. T.) <b>SAROJ MOHAN INST. OF TECHNOLOGY</b> B.Tech. (ECE) 2007	79	TECHING DEGREE ENGG. STUDENTS IN CST, BHUTAN FROM 27TH AUG' 07 TO ON WORKS.	SRI MANOJ KUMAR MANDAL, WESEB (SERVICE EMPLOYEE)
11.	<b>UTPAL DATTA</b>  LECTURER IN ELECTRICAL ENGG. M. B. C. INSTITUTE OF ENGG. & TECHNOLOGY, SADHANPUR, BURDWAN - 713101	24/12/1968 (M)	<b>UNIVERSITY OF NORTH BENGAL</b> B. E. (ELECTRICAL) 1991	69	TOTAL EXP. 15 YRS, INDUSTRIAL EXP. 5 YRS & TEACHING EXP. 10 YRS.	DIRECTORATE OF TECHNICAL EDUCATION & TRAINING GOVT. OF W. B.
12.	<b>SOMNATH PRADHAN</b> 111/1, RAJA RAM MOHAN ROY ROAD NETAJI SARA, KOLKATA - 700 008	04/07/1983 (M)	(W. B. U. T.) <b>B. P. PODDAR INST. &amp; MNGT. &amp; TECH.</b> B.Tech. (ECE) 2006	7.48	TOTAL 2, 10 YRS OF WORKING EXP. 3 YRS. IN EMBEDDED DESIGN AND 1-7 IN TELECOM.	E - MECH SYSTEM
13.	<b>YAGNIK NIKUNJ SANJAY KUMAR</b>  AUTOMOBILE DEPARTMENT A. D. PATEL INSTITUTE OF TECH. NEW V. V. NAGAR, ANAND, GUJRAT, PIN - 388121	06/03/1983 (M)	<b>NORTH GUJARAT UNIVERSITY</b> B. E. (MECHATRONICS) 2004	64.65	LECTURER : 3 RESEARCH PAPER (INTERNATIONAL CONFERENCES)	A. D. PATEL INST. OF TECHNOLOGY
14.	<b>ARKA MUKHERJEE</b> 7/51, NABAPALLY WARD NO. 5 NEW BARACKPORE, NORTH 24 PARGANAS KOLKATA - 700131	06/03/1984 (M)	<b>THE UNIVERSITY OF BARDWAN</b> B.Tech. (E.I.E) 2007	76.3	M/S. P. P. ENTERPRISE M/S. CEMENT MANUFACTURING M/S. GREEN WAVE CONVERGENCE	M/S. GREEN WAVE CONVERGENCE

# LIST OF APPLICANTS FOR M.TECH IN MANUFACTURING TECHNOLOGY FOR THE ACADEMIC YEAR 2009-2010

Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
1.	Sri Saibal Das	Flat No. IJ, Toly Green, 205 B, N.S.C. Bose Road, Kolkata -700 040 Tel: 24997746	Gen	69%	-	BE in Mechanical	PGDBM in (Mkg.& Fin.)	N.A.	DD No.188848
2.	Sri Saroj Kr.Singh	C/O. Mr.M.M. Ghosh BL-4, Sector-III, Salt Lake City Kolkata-700 091 Tel: 09973604423	Gen	75.7%	-	BE in Mechanical – 78.22%	-	N.A.	DD No.966905
3.	Sri Praveen Choudhary	House No. 1477, Sector-37, Noida, Gautam Budd Nagar (Uttar Pradesh) Pin-201 304 Tel: 978073521/9911134969	Gen	-	-	B.TECH in Mechanical – 73.05%	-	N.A.	DD No.638268
4.	Sri Jyotiprakash Bhol	AT. Kantanali, Near Bypass Chhak, Dhenkanal, Orissa Pin- 759 001 Tel: 06762-225469/ 09437292274	Sponsored	54%	-	A.M.I.E Mechanical- 57%	-	N.A.	DD No.218693
5.	Sri Subhasan De	69/8, Shaik Para Lane P.O. B. Garden, Dist. Howrah Pin- 711 103 Tel: 09432382311	Gen	68.30%	-	B.TECH Automobile- 86.55%	-	N.A.	DD No.705164
6.	Sri Abhay Kr. Pal	Hijli Hospital Qtr., Qtr. No. -13 Kharagpur, Medinipur (West) Pin- 721 306., W.B. Tel: 03212-274345/ 9474360669	Gen	58.4%	-	B.TECH Production Engineering – DGPA-7.77	-	N.A.	DD No.838853
7.	Miss Nisantika Biswas	Uditi Co-op housing, House No.-2, Phase-III, A-5 Kalyani, Nadia, Pin-741235, W.B. Tel:9832692098	Gen	-	D.M.E- 76.2%	B.TECH Mechanical- Upto 7 <sup>th</sup> Semester- 7.506%	-	N.A.	DD No.055432

Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
8.	Sri Babuli Kr. Jena	At. Alupatana, P.O. Satapada, via Brahmagiri Dist.- Puri, Orissa Pin – 752 011 Tel:0675-262122/ 09438177552	SC	44%	-	B.E. Mechanical- 63.5%	-	288 valid upto 15.03.20 10	DD No.603851
9.	Sri Jatindra Kumar Das	At. Ranapada, P.O. Jalanga, Dist. Bhadrak Pin- 756 100 Tel:9937531923	Sponsored	41.33%	-	A.M.I.E- 51.82%	-	N.A.	DD No.608107
10.	Sri Vikash Kr. Jha	Jhinaher Hastel, Room No. 60, Barkatullah University, Bhopal (M.P) Pin-462 2026 Tel: 09300046857	Gen	47.5%	-	B.E. Mechanical- 7.16%	-	N.A.	DD No.340795
11.	Sri Sampat Jana	C/O Sanatan Jana, 11/B, Atul Chandra Mitra Lane, P.O. Konnagar, P.S.- Uttarpara, District- Hooghly, Pin- 712 235 Tel: 9851873860	SC	49.60%	D.M.E.- 76.10%	B.TECH Production Engineering - 7.41% Appeared	-	N.A.	DD No.902245
12.	Sri Satindra Nath Bhattacharya	C/O Mr. Rajib Bhattacharjee ABC Housing, GA-35, Narayantala Rd., West Bagaihati, P.S.- Desh Bandhu Nagar, Kolkata-700 059 Tel: 09971260231/ 09836092655	Gen	58.3%	-	B.TECH Production Engineering- 72.91%	-	N.A.	DD No.356864
13.	Sri Gunjan Dutta	S/O Sri Akhil Chandra Datta House No. -2132, Desbandhu Pally, P.O. Puruandapally, Naihati, Dist. 24-Pgns (N), W.B., Pin-743165	Gen	60.4%	D.M.E.- 78.5%	Degree in Mechanical Engineering – 75.3%	-	N.A.	DD No.044703
14.	Sri Bikash Panja	Vill + P.O. Santipur Dist.- Hooghly, W.B. Pin-712 122 Tel: 09433233662	Gen	-	D.M.E.- 75.80%	B.TECH Mechanical- Upto 7 <sup>th</sup> Semester-	-	N.A.	DD No.849907

Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
						7.59%			
15.	Sri Premangshu Mukhopadhyay	C/O A.K.Mukhopadhyay Ex.Engineer (Civil), C.C.W, All India Radio, Doordarshan Bhawan, Golf Green, P.O.- Lake Garden, Kol-700 095, Tel:9748687164	Gen	AISSCE -61%	-	B.TECH Mechanical- 60.10%	-	N.A.	DD No.367435
16.	Sri Subrata Mahata	Village- Dabor, Post. Achra District-Burdwan, W.B. Pin-713335 Tel:9932859165	Gen	AISSCE -69.80%	-	B.TECH - Upto 7 <sup>th</sup> Semester- 8.63%	-	336 valid upto 15.3.201 0	DD No.428813
17.	Sri Dibyendu Halder	N/D-15, Jagatpur, P.O. Gouranga Nagar, Kolkata-700 059, W.B. Tel:9231652288	SC	62.70%	-	B.E. Mechanical- 66.52%	-	264 valid upto 15.3.201 0	Pay order no. 101770
18.	Sri Goutam Dutta	5/54, Bijoygarh, P.O. Regent Estate, Kolkata-700 092 Tel: 9830011998	Sponsored	68.40%	91.67%	B.E. Mechanical- 81.51%	-	N.A.	DD No.46655
19.	Sri Sandip Das	C/O Sujit Chakraborty 695, J.N.Bose Road Subhasgram, Near Sandipan Path Shala, Kolkata-700 146 Tel:09634768653 9831527092	SC	45%	-	B.E. Mechanical- 61%	-	N.A.	DD No.459390
20.	Sri Nuruddin Biswas	138/1 Abdus Samad Rd., Gorabazar, P.O. Berhampore, Dist Murshidabad, W.B Pin-742 101 Tel: 9434223714	Sponsored	67.1%	-	B.E. Mechanical- 61%	-	N.A.	DD No.675877
21.	Sri Tanmay Baral	7-Green Park P.O. Thakurpukur Kolkata-700 063 Tel:9432864747	SC	49.50%	-	B.TECH Mechanical- 58.10%	-	N.A.	Demand draft not enclosed.
22.	Sri Sourav Das	106/4, Rajpukur Path P.O. Athpur, Dist.- N.24 Parganas, W.B. Pin-743128 Tel: 9883293900	SC	80.6%	-	A.M.I.E – 6.48%	-	275 valid upto March 15,2010	DD No.517365

Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
23.	Sri Ashutosh	Adarsh Colony, West Patel Nagar, Panch Mandir Road, Patna, Bihar Pin-800 024 Tel:0612-2292765, 09308670320	Gen	50%	-	B.TECH Mechanical-64.10%	-	N.A.	DD No.285967
24.	Sri Tanmay Kr.Barik	C/O Mr.A.C.Barik At Jhumukapal Khuntapada, Via- Raruan, Dist. Mayurbhanj, Orissa Pin: 757035 Tel:9437755849	OBC	64.6%	-	B.TECH Mechanical-Upto 7 <sup>th</sup> Semester-7.25%	-	N.A.	DD No.608365
25.	Sri Shambhu Nath Datta	C.K. Sen Rd., Janangapi Near Northern Grill Agency P.O. Agarpura, Pin-700109, W.B. Tel:9231350851	Gen	60.7	-	B.Science in Engg. Mechanical-57.65%	-	N.A.	DD No.780526
26.	Sri Gourab Chakraborty	B.C.Sen Road, Shaktipur, P.O. Agarpura, 24-Parganas(N), Pin-700 109 Tel:033-25954140	Gen	70.6%	-	B.TECH Mechanical-7.5 approx	-	N.A.	DD No.559644
27.	Sri Sandip Kr.Mandal	C/O Maniklal Mandal Vill. Naskarpur P.O. Champadanga Dist.Hooghly, W.B. Pin-712 401 Tel:03212-55220/09851536952	Gen	80.8%	-	B.TECH Mechanical – DGPA-7.74	-	N.A.	DD No.840456
28.	Sri Aditya	S/O Satya Prakash Sharma C/O Dr.Avinash Kumar, Chauhatti Bazar, Siyana (Bulanhshahar) U.P. Pin-245412 Tel:094562003709/ 09412546776	Gen	64.8%	D.M.E-72.38%	B.TECH-70.42%	-	NA	DD No.557868



Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
29.	Sri Taraknath Bandyopadhyay	Uttarmath para, Saradapally Opp. Khudiram Primary School, Rampurhat, Dist. Birbhum, W.B. Pin-731224 Tel:9851427670/ 9832280995	Gen	56.2%	-	B.TECH Mechanical- Upto 7 <sup>th</sup> Semester- 7.37%	-	NA	DD No.641887
30.	Sri Chandan Das	951, Shanpur, Dasnagar Howrah, Pin-7111 05, W.B. Tel:9433350528	Gen	54.5%	D.M.E- 71.4%	B.TECH Mechanical- Upto 7 <sup>th</sup> Semester- 64.5%	B.Sc- 53.5% MBA- 80.4%	NA	DD No.702662
31.	Sri Chiranjit Guchait	C/O Bablu Guchait, 3 No. Mukherjee Bagan Bye Lane, P.O. Konnagar, Dist. Hooghly, Pin- 712 235 Tel: 905183328	Gen	-	Diploma in Tool & Die Making - 69.7%	B.E. Mechanical- Upto 7 <sup>th</sup> Semester- 64.5%	-	NA	DD No.690026
32.	Sri Parikshit Ghosh	C/O Tarun Pan 35/A/35/I, Bidyayatan Sarani, Near Dunlop, Kolkata-700 035 Tel: 9433804939	Gen	-	D.M.E- 66 %	AMIE Sec A-55% Sec B-54%	-	NA	DD No.033272
33.	Sri Sanjaya Kumar Swain	C/O Bijaya Kumar Swain BASULAI LANE (BASANTI COLONY) P.O. Kendrapara Dist: Kendrapara Pin: 754 211 Tel: 06727(233974)	Gen	-	D.M.E- 66 %	B.TECH Mechanical- Upto 6 <sup>th</sup> Semester- 63.26%	-	NA	DD No.104733
34.	Sri Md.Zeeshan	CMERI, New Colony Durgapur, Dist. Burdwan Pin- Permanent Address: Mojahidpur (East) P.O. City Post office, Bhagalpur, Bihar, Pin-812 002 Tel :09832882489	Gen	48.5%	-	B.SC Engg. (Mechanical) -73.8%	-	431 valid upto 15.03.2010	DD No.754320

Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
35.	Sri Amit Kumar Bhakta	C/O Arati Bhakta At. Kaushallya, P.O. Kharagpur Dist:-Paschim Mednipur Pin-721 301, W.B. Tel:9933038687/ 9547079619	SC	48.60%	-	B.TECH Mechanical- -6.49	-	NA	DD No. 751082
36.	Sri Syed Ahmed Iqbal Khatib	S/O Syed Bashiruddin Khatib H.No. 23-161, Near Dental College, Kallur Road, TQ. Humnabad, Dist Bidar, Karnataka Pin-585330 Tel:0848-3271766 / 91-9886803819	Gen	58%	-	B.E. Mechanical- 58%	-	NA	DD No. 638357
37.	Sri Susovan Kanjilal	5/1, Jadavgarh, Haltu Kolkata- 700 078 W.B. Tel: 9433798573(M)/ 033-24053079	Gen	57.3%	-	B.TECH Mechanical- DGPA-7.52	-	NA	DD No. 128838
38.	Sri Arindam Kar	27/1/G Roypur Mondal Para Road, Keyabagan, Kolkata- 700 047 Tel:033-24625050	Gen	60%	D.M.E.- 75.80%	AMIE- 51.9%	-	NA	DD No. 293420
39.	Sri Satyabrata Podder	16-A, Chaul patty Road, Beliaghata, Kolkata-700 010 Tel: 9874070870/ 9231662334	Gen	58.3%	-	DGPA- 8.1	-	N.A.	DD No. 648806
40.	Sri Promod Kumar Sanyal	Junior Engineer (Mech.) Marine Dockyard D.S.S. Port Blair, A & N Islands Pin-744 101 Tel:9434261962/ 9434294649	Sponsored	-	D.M.E.- 76%	B.TECH Mechanical- -76.1%	-	N.A.	DD No. 104377
41.	Sri Abhishek Pal	H.No- A12, Raksha Karmachari Colony, Ambedkarward, Ranjhi Jabalpur, Madhya Pradesh Pin-482 005	Gen	57.3%	D.M.E.- 60%	B.E. Mechanical- 71.72%	Post Diploma in CAD/ CAM	N.A.	DD No. 957051

Sl. No.	Name	Address	Category	Qualifications				Gate Score	Remarks
				HS	Diploma in	BE / B.Tech / equivalent	Others		
		Tel:0761-2632486/ 0982733512							
42.	Sri Anupam Mondal	House No. 4/4, Astha Apartment, Flat No. 3A 53, Lake East, 4 <sup>th</sup> Road, Santoshpur, Kolkata-700 075 Tel:9434987375	SC	49.5%	-	B.TECH Mechanical- -58.24%	-	N.A.	DD No. 438586
43.	Sri Sai Prasad Ojha	C/o Jharna Ojha, G-4/B-2: SSSIHMS, Prasantigram, At/P.O. P Prasantigram, Dist: Ananthpur, A.P. Pin – 515 134 Tel:- 9886016044	Sponsored	79.2%	-	B.E. Mechanical- 71.589%	-	N.A.	DD No. 536141
44.	Sri Biseswar Sutar	15/5, Sree Hari Pally P.O. Haltu, Kolkata-700 078 Tel:09836439218	Sponsored	-	D.M.E.- 67.1%	B.E. Mechanical- 64.36%	-	N.A.	DD No.796109
45.	Sri Nilkanta Lahiri	Baxibari More, Guriahati Road, P.O. & Dist. Coochbehar Pin-736 101 Tel:9832030524	Sponsored	56.20%	-	B.E. Mechanical- 70.28%	-	N.A.	DD No.943737
46.	Sri Manas Roy	5/115, Aurobindo Block, Santoshpur, Kolkata-700 075 Tel:033-24837702	Gen	55.5%	-	B.TECH Mechanical- Upto 7 <sup>th</sup> Semester- 76.04%	-	N.A.	DD No.056482
47.	Sri Bharat Kumar Behera	C/O Digamber Behera At. Balabhadrapur, P.O-Mohan Via- Rameswar, Dist. Cuttack Pin-754201 Tel:09438012460	OBC	51%	-	Degree (Mechanical)- 73.21%  <i>Educational certificates are not enclosed.</i>	-	305 valid upto 15.3.201 0	DD No.603929



# **Annexure - V**

**NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS' TRAINING & RESEARCH**

**Department of Computer Science & Engineering**

**List of Application Software/Language Compilers & OS**

1. Windows, Linux, Unix
2. Oracle 8 with D2K
3. MF Cobol
4. Fortran
5. STAAD
6. Adobe Premiere
7. Animation Pro
8. 3D Studio
9. Authorware Professional
10. Power Builder
11. Tool Book Instructor
12. 3D F/X
13. Digital Video Producer
14. Corel Draw
15. Adobe Photoshop
16. Director
17. AXA Team 2D
18. Flash
19. Visual Studio
20. MS Office
21. MS Project
22. DB2
23. MAP INFO
24. MAP BASIC
25. Norton Antivirus
26. Asymetrix Tool Book Instructor (latest version)
27. Maya Complete 5
28. National Instruments Lab View (latest version)
29. Adobe Video Collection (latest version)
30. Macromedia Authorware Professional (latest version)
31. Corel Draw Graphics Suite (latest version)
32. Oracle 9i
33. Macromedia Studio MX 2004
34. Web Sphere
35. Adobe CS3 Master Collection
36. Rational Suite

[The resources available in the Dept. of CSE are being used by other departments as and when necessary]

# **Annexure - VI**

## XVII.WBUT ACADEMIC CALENDAR

For the year 2010

Even Semester		For continuing batch	
1	Academic programme commenses	January 22, 2010	
2	First Test Slot (UG/PG)	March 1 to 10, 2010	
3	Second Test Slot (UG/PG)	April 15 to 22, 2010	
4	Teaching Ends (For all UG & PG)	April 30, 2010	
5(a)	Practical Examination & Viva-Voce (All semester, UG & PG)	May 3 to 8, 2010	
5(b)	Theory (for all UG & PG)	May 14 to June 5, 2010	
6	Examination form submission (All semester)	Notice will be given to the webiste <a href="http://www.wbut.ac.in">www.wbut.ac.in</a> / <a href="http://www.wbut.net">www.wbut.net</a>	
7	Summer Recess	June 6 to July 18, 2010	
8	Result for all to be published by	Mid August, 2010 as announced through website <a href="http://www.wbut.ac.in">www.wbut.ac.in</a> / <a href="http://www.wbut.net">www.wbut.net</a>	
Practical Training where applicable during summer recess			
Odd Semester		New Batch	Continuing Batch
1	Academic programme commences	August 3, 2010	July 19, 2010
2	Admission of new students closes	August 31, 2010	
3	First Test Slot	September 10 to 23, 2010	September 13 to 19, 2010
4	Registration of newly admitted students for the session 2010 - 11 ends	October 10, 2010 (General & Lateral entry both)	
5	Mid-Semester Break	October 13 to 23, 2010	October 13 to 23, 2010
6	Second Test Slot	October 27 to November 9, 2010	November 8 to 14, 2010
7	Teaching Ends	November 20, 2010	November 20, 2010
8(a)	Practical Examinations & Viva-Voce (For all UG & PG)	November 24 to 30, 2010	November 24 to 30, 2010
8(b)	Theory (For all UG & PG)	December 7 to 24, 2010	December 7 to 24, 2010
9	Inter semester break	December 25, 2010 to January 12, 2011	December 25, 2010 to January 12, 2011
10	Visit websites <a href="http://www.wbut.ac.in">www.wbut.ac.in</a> & <a href="http://www.wbut.net">www.wbut.net</a> for announcements regarding Registration & Examinations time to time		