WALCHAND COLLEGE OF ENGINEERING, SANGLI

(An Autonomous Institute)

RULES FOR ADMISSION

TO

MASTER OF TECHNOLOGY

AND

THE PRESCRIBED APPLICATION FORM

YEAR 2010-2011

WALCHAND COLLEGE OF ENGINERING, SANGLI

RULES FOR ADMISSION TO M. TECH. PROGRAM

1) The following TWO years M. Tech. programs are conducted at the college

i M. Tech. Civil (Structural Engineering.)

ii M. Tech. Civil (Environmental Engineering.)

iii M. Tech. Mechanical (Heat Power Engineering)

iv M. Tech. Mechanical (Design Engineering)

v M. Tech. Mechanical (Production Engineering)

vi M. Tech. Electrical (Power System)

vii M. Tech. Electrical (Control System)

viii M. Tech. Electronics Engineering

ix M. Tech. Computer science and Engineering

Candidate must submit separate original application form with fee (Not a Xerox copy) for each program of interest out of the above list.

2) **Eligibility:**

A A candidate who has passed the degree of **B. E. / B. Tech.** of Shivaji University or degree of another University as equivalent thereto, with minimum of 50% marks in the final year is eligible for admission to the **appropriate M. Tech. program**, by papers and dissertation.

B The Diploma holders after passing their section A and B examinations of Institution of Engineers (India) Kolkata are considered eligible for admission to M. Tech. program in the respective branch only when they qualify through the GATE examination for the respective branch.

C A candidate who has passed B. E. / B. Tech. in Civil / Water management / Environmental Engineering from Shivaji University or equivalent examination from any other University is eligible for admission to the M. Tech. Civil (Environmental Engineering).

D A candidate who has passed B.E. (Automobile Engineering), B. E. (Production Engineering Specialization) degree course is considered eligible for admission to M. Tech. Mechanical program. A candidate with GATE score in Mechanical Engineering will be given preference.

E A candidate who has completed B.E., B. Tech. degree in Industrial Engineering or Production Engineering is eligible for admission to M. Tech. Mechanical (Production Engineering) program.
The candidate with GATE score in Industrial Engineering will be given preference.

F A candidate who has passed the Grade-Institution of Electronics and Telecommunication Engineers Examination is eligible for the admission to M. Tech. Electrical (Control System) if he/she has passed GATE (Graduate Aptitude Test in Engineering) examination for Electrical Engineering successfully and has studied the following courses during their studies leading to Grade Institution of Electronics and Telecommunication Engineers Examination.

i) Electrical Machines.
ii) Numerical Analysis.
iii) Control System

G (a) Any Engineering graduate who has studied at least one subject in Control System at under graduate level is eligible for the admission to M. Tech. Electrical (Control System) program.

(b) Any Engineering graduate who has studied at least two subjects of (i) Electrical Machines (ii) Electrical Power Systems at third and final year of B.E. course is eligible for the admission to M. Tech. Electrical (Power System) program.

The candidate with GATE score in Electrical Engineering will be given preference.

H A candidate who has passed the Grade-Institution of Electronics and Telecommunication Engineers Examination is eligible for the admission to M. Tech. Electronics, if he/she has passed GATE (Graduate Aptitude Test in Engineering) examination for Electronics Engineering successfully.

I A candidate who has passed final year in any of the following discipline of engineering degree course with minimum 50% of aggregate marks is considered eligible in the order of preference as shown below.

i) B.E. / B. Tech.(Computer Science & Engineering).
ii) B.E. / B. Tech. (Computer Engg.).
iii) B.E. / B. Tech. (Computer Tech).
iv) B.E / B. Tech. (Information Technology).
v) B.E / B. Tech. (Electronics Engineering).

A candidate with valid GATE score in Computer Science and Engineering will be given first preference as per GATE score.

J For admission under the sponsored category the candidate should have, in addition to the qualification mentioned in A to I, minimum of two years full time work experience as a permanent employee in a registered firm / company / industry / educational or research institute or in any Govt / Non-Govt. Organization in the relevant field. The candidate under sponsored category will have to submit the certificate from his/her employer in the prescribed format given in this form. GATE qualified sponsored candidate will be given preference.

3. **Admission:**
Admission will be offered according to merit list prepared on the basis of valid GATE score in the respective branch only. GATE score in one branch will not be valid for admission to other branch.

4. A few candidates who secure admission as per procedure outline in (3) and are qualified through GATE will be eligible, as per AICTE norms, for the stipend of Rs 8000/- per month for the duration of the program from the date of joining as per AICTE norms.
The students must pass in all subjects during the First Semester and the Second Semester examinations to become eligible for continuation of scholarship during the second year. If student fails in one or more subject in a semester and is still allowed to continue in the next semester in accordance with the rules of the institute making provision for clearance of the subject at the later stage, he/she is not eligible for getting any scholarship for the second year of the course.
The stipend will be paid only after the receipt of the grant from the AICTE NEW DELHI.

5. If the seats available do not get filled in by the GATE qualified applicants, the remaining seats will be considered for admission on a non-stipendiary basis. **Non-GATE applicants will have to appear for an entrance test conducted by the College.** The candidate's performance in entrance examination and personal technical interview will be given weightages of 70% and 30% respectively for the preparation of merit list of such Non-GATE students.

6. **Five seats in each course are reserved for the sponsored candidates.** All sponsored (Non-GATE) candidates will have to appear for the entrance test conducted by the College. GATE qualified sponsored candidate will be given preference. Preference will be given to the candidate who is serving in Engineering College, Polytechnic or Industry, in that order.

7. The number of candidate to be admitted to each of the program depends on the faculty position of the department at the time of admission. Admission to the sponsored category will be effected according to the merit list as mentioned in 5. Sanctioned intake for each course is as follows.

M. Tech. Program	Normal Intake	Seats for SC	Seats for ST	Sponsored seats
Civil (Structural Engineering)	5	1	1	5
Civil (Environmental Engineering)	5	1	1	5
Mechanical (Heat Power Engineering)	5	1	1	5
Mechanical (Design Engineering)	5	1	1	5
Mechanical (Production Engineering)	10	2	1	5
Electrical (Power system)	5	1	1	5
Electrical (Control system)	5	1	1	5

Electronics Engineering	10	2	1	5
Computer science and Engineering	10	2	1	5

8. All admission offered and accepted will be **provisional** and will be subjected to the grant of the eligibility by Shivaji University, Kolhapur, and or College. For this purpose, every applicant has to fill in the eligibility form and submit it along with the original transference/leaving certificate from his/her previous institutes, the mark sheet and passing certificates of his/ her previous examination and the migration certificates from the previous university at the time of admission.
9. The candidate will also have to register as a post graduate student with the Shivaji University by applying for the same along with a necessary fee.
10. Applicants belonging to reserved categories will have to produce their **caste certificate and caste validity certificate** from competent authorities, for being considered for the reserved seats. If the caste certificate/caste validity certificate is not produced, he /she will be considered as an open candidate.
11. Every stipendiary candidate will have to carry out some assignments of undergraduate teaching or laboratory development and administration as assigned by the College.
12. The student shall be required to give an undertaking to the effect that he/ she would not leave the course midway or appear in any competitive examination in order to be eligible to receive scholarship.
13. Fees: (Per Year) **(Likely to be revised)**

Category	Tuition fees Rs	Contingency charges Rs	Development fees Rs	Other fees Rs	Total Fee Rs
Normal intake-GATE candidates	15000	5000	12500	10000	**42500**
Non sponsored candidates	15000	5000	12500	10000	**42500**
Sponsored candidate	15000	10000	12500	10000	**47500**

Other fees

M. Tech. Program	**Civil**	**Mechanical**	**Electrical**	**Electronics**	**Computer Science**
Exam Fee Rs.	2450	2450	2450	2150	2150
Hostel Fee Rs.	7000	7000	7000	7000	7000
Security and Wi-Fi Rs.	1000	1000	1000	1000	1000
Hostel deposit Rs.	1000	1000	1000	1000	1000
Caution deposit Rs.	500	500	500	500	500
Registration, Eligibility of Shivaji University (aprx.) Rs.	1500	1500	1500	1500	1500
Total Rs.	**13450**	**13450**	**13450**	**13150**	**13150**

Entire fees per year are to be paid in only one installment on the day of admission.

14) **Conduct and Discipline:**

a) Candidate admitted to these courses if found indulging in any activities contrary to the rules formed in this behalf by the college, university/Govt. is liable to be expelled from the college without any notice by the Director.

b) If any statement made in application from or any information supplied by the candidate in connection with the admission, is later on at any time, found to be false or incorrect, his/her admission will be cancelled and he may be expelled from the college by the Director.

c) **<u>Action against ragging:</u> Maharashtra Prohibition of Ragging Act 1999 which is in effect from 15th May 1999 has the following provisions for Action against Ragging.**

i) Ragging within or outside of any educational institution is prohibited.

ii) Whosoever directly or indirectly commits, participates in, abets, or propagates ragging within or outside any educational institution shall, on conviction, be punished with imprisonment for a term up to 2 years and / or penalty which may extend to ten thousand rupees.

iii) Any student convicted of an offence of ragging shall be dismissed from the educational institution for a period of five years from the date of order of such dismissal.

iv) Whenever any student or, as the case may be, the parent or guardian or a teacher of an educational institution complaints, in writing, of ragging to the head of the educational institution, the head of the educational institution shall, without prejudice to the foregoing provisions, within seven days of the receipt of the complaint, enquire into the matter mentioned in the complaint and if, prima facie, it is found true, suspend the student who is accused of the offence, and shall, immediately forward the complaint to the police station having jurisdiction over the area in which the educational institution is situated, for further action. Where, on enquiry by the head of the educational institution, it is found that there is no substance, prima facie, in the complaint received, he/she shall intimate the fact, in writing, to the complaint, The decision of the head of the educational institution shall be final.

v) If the head of the educational institution fails or neglects to act in the manner specified in section “d” above when a complaint of ragging is made, such person shall be deemed to have abetted the offence and shall, on conviction, be punished as provided for in section “b” above.

15) The candidate will not be permitted to appear for examination if after admission he/she does not put in satisfactory attendance at all theory and practical classes and does not complete the précised term work / project work to the satisfaction of the subject teacher.

16) Refund of fees: As per rules prescribed by the college authorities from time to time.

17) Hostel: Limited hostel accommodation and mess facilities are available.

18) The application form can be downloaded from the college website www.walchandsangli.ac.in. The form must be submitted (hard copy) with a D.D. of Rs.700/- for open category and D.D. of Rs 500 for reserve category candidate (SC/ST only). D.D. must be drawn in favors of **"Director, Walchand College of Engineering, Sangli"** on any nationalized bank payable at Sangli.

19) The last date for receiving completed applications form together with necessary enclosures is 5th July 2010.

20) The merit list of the applicant with valid GATE score will be put up on the notice boards of the respective departments on 9th July 2010 by 10.00 a.m. Candidate should report to the concern department sharp at 10.00 a.m. Admission will be offered as per merit list on the same day according to the availability of seats.
Candidate in the merit list, who reports late on this date, will only be considered for admission, subject to the availability of vacancy at that time.

21) The entrance test for non-GATE applicant will be held on 9th July 2010 in the respective department. The interviews of non-GATE candidate will be conducted on 10th July 2010 in respective department at 10.00 a.m. and merit list will be announced. Admission will be offered as per merit list according to the availabilities of seats. The course will commence on 12th July 2010.

Time table for the tests to be conducted for various disciplines:
(Non-GATE sponsored & Non-GATE non-sponsored category candidates only)

Department	Date	Time
Civil (Environmental Engineering)	9th July 2010	1:15 p.m.
Civil (Structural Engineering)	9th July 2010	11:00 a.m.
Mechanical (Heat Power Engineering)	9th July 2010	11:00 a.m.
Mechanical (Design Engineering)	9th July 2010	11:00 a.m.
Mechanical (Production Engineering)	9th July 2010	11:00 a.m.
Electrical Engineering (Power Systems)	9th July 2010	11:00 a.m.
Electrical Engineering (Control Systems)	9th July 2010	1:15 p.m.
Electronics Engineering	9th July 2010	11:00 a.m.
Computer science and Engineering	9th July 2010	3:30 p.m.

22. GATE card must be produced in the original at the time of admission. The candidate whose results are yet to be declared will be held eligible subject to the condition that they will produce the results within 15 days from the date of admission. If they fail to produce the result, the seat will be offered to the next candidate in the merit list.
The candidates will have to bring all the certificates including B.E/ B.Tech. Mark list, leaving certificates, migration certificates if applicable, cast and cast validity certificate and passing certificates in original at the time of admission.

23. Any change in the rules / procedure as may be made by Govt. of India/ Govt. of Maharashtra / Shivaji University / College authorities regarding the admission to the College will be applicable as and when it is announced.

IMPORTANT DATES:

Admission schedule	
Last date of submission of application	5th July 2010
Admission Round-I	
Admission of GATE qualified candidates	9th July 2010
Written test of non –GATE candidates	9th July 2010
Interview of non –GATE candidates and display of merit list	10th July 2010
Admission of non-GATE candidates	10th July 2010
Commencement of the PG classes	12th July 2010
Admission Round -II	
Display of vacancy position	23rd July 2010
Admission of GATE and non-GATE candidates	26th July 2010
Admission Round -III	
Display of vacancy position	4th August 2010
Admission of GATE and non-GATE candidates	5th August 2010

- P.G. Academic rules and regulations can be downloaded from our website www.walchandsangli.ac.in
- Cancellation of admission will be processed as per DTE norms in force time to time.

Contact phone numbers of respective departments for the detailed information

S.N.	Name of Department	Phone Number (0233)	Head of Department
1	Civil Engineering	2300330	Dr. K. S. Wagh
2	Applied Mechanics	2300714	Dr. S. N. Tande
3	Mechanical Engineering	2300716	Dr. S. P. Chavan
4	Electrical Engineering	2300933	Dr. A. P. Vaidya
5	Electronics Engineering	2304470	Mrs. S. S. Deshpande
6	Computer Science & Engg.	2301327	Dr. S. M. Deshpande

Annexure-A

SYLLABUS FOR ENTRANCE EXAMINATION

M. TECH. CIVIL (STRUCTURES)

1. Static and kinematics indeterminacy, equations of equilibrium, compatibility equations. Virtual work method to determine reactive forces in compound determinate beams.
2. Slopes and defections by Macaulay's method, moment area method, conjugate beam method, energy methods- Castiglano's theorems.
3. Analysis of Indeterminate Structures: Slop defection method, Moment destruction method and Energy method.
4. Influence lines for determinate structures
5. Matrix methods: Flexibility and Stiffness Methods.
6. Design of steel structures: Roof trusses, Beams, Columns and Column bases
6. Design of R. C. Structures: Design of slab, beam, column and footing by Working stress and Limit state method.
8. Pre-stressed concrete: stress concept, strength concept, load balancing concept and losses in pre-stressing.

M. TECH. CIVIL (ENVIRONMENTAL ENGINEERING)

1. Water requirements: Quality standards, basic unit processes and operations for water treatment. Drinking water standards, w
2.
3. ater requirements, distribution of water.
4. Sewage treatment and sewerage system, quantity and characteristics of wastewater, Primary, and secondary treatment of wastewater, sludge disposal, effluent standards.
5. Air Pollution: Types of pollutants, their sources and impacts, air pollution meteorology, air pollution control, air quality standards and limits.
6. Municipal Solid Wastes: Characteristics, generation, collection and transportation of solid wastes, engineered systems for solid waste management (reuse/recycle, energy recovery, treatment and disposal).
7. Noise Pollution: Impacts of noise, permissible limits of noise pollution, measurement of noise and control of noise pollution.

M. TECH. MECHANICAL (DESIGN, HEAT POWER AND PRODUCTION)

DESIGN ENGINEERING

1. **Engineering Mechanics:** Free body diagrams and equilibrium; trusses and frames; virtual work; kinematics and dynamics of particles and of rigid bodies in plane motion, including impulse and momentum (linear and angular) and energy formulations; impact.
2. **Strength of Materials:** Stress and strain, stress-strain relationship and elastic constants, Mohr's circle for plane stress and plane strain, thin cylinders; shear force and bending moment diagrams; bending and shear stresses; deflection of beams; torsion of circular shafts; Euler's theory of columns; strain energy methods; thermal stresses.
3. **Theory of Machines:** Displacement, velocity and acceleration analysis of plane mechanisms; dynamic analysis of slider-crank mechanism; gear trains; flywheels.
4. **Vibrations:** Free and forced vibration of single degree of freedom systems; effect of damping; vibration isolation; resonance, critical speeds of shafts.
5. **Design:** Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram; *principles* of the design of machine elements such as bolted, riveted and welded joints, shafts, spur gears, rolling and sliding contact bearings, brakes and clutches.

HEAT POWER ENGINEERING

1. **Fluid Mechanics:** Fluid properties; fluid statics, manometry, buoyancy; control-volume analysis of mass, momentum and energy; fluid acceleration; differential equations of continuity and momentum; Bernoulli's equation; viscous flow of incompressible fluids; boundary layer; elementary turbulent flow; flow through pipes, head losses in pipes, bends etc.
2. **Heat-Transfer:** Modes of heat transfer; one dimensional heat conduction, resistance concept, electrical analogy, unsteady heat conduction, fins; dimensionless parameters in free and forced convective heat transfer, various correlations for heat transfer in flow over flat plates and through pipes; thermal boundary layer; effect of turbulence; radiative heat transfer, black and grey surfaces, shape factors, network analysis; heat exchanger performance, LMTD and NTU methods.
3. **Thermodynamics:** Zeroth, First and Second laws of thermodynamics; thermodynamic system and processes; Carnot cycle. irreversibility and availability; behavior of ideal and real gases, properties of pure substances, calculation of work and heat in ideal processes; analysis of thermodynamic cycles related to energy conversion.
4. **Applications:** *Power Engineering*: Steam Tables, Rankine, Brayton cycles with regeneration and reheat. *I.C. Engines*: air-standard Otto, Diesel cycles. *Refrigeration and air-conditioning*: Vapour refrigeration cycle, heat pumps, gas refrigeration, Reverse Brayton cycle; moist air: psychrometric chart, basic psychrometric processes. *Turbomachinery:* Pelton-wheel, Francis and Kaplan turbines - impulse and reaction principles, velocity diagrams.

PRODUCTION ENGINEERING

1. **Engineering Materials**: Structure and properties of engineering materials, heat treatment, stress-strain diagrams for engineering materials.
2. **Metal Casting:** Design of patterns, moulds and cores; solidification and cooling; riser and gating design, design considerations.
3. **Forming:** Plastic deformation and yield criteria; fundamentals of hot and cold working processes; load estimation for bulk (forging, rolling, extrusion, drawing) and sheet (shearing, deep drawing, bending) metal forming processes; principles of powder metallurgy.
4. **Joining:** Physics of welding, brazing and soldering; adhesive bonding; design considerations in welding.
5. **Machining and Machine Tool Operations:** Mechanics of machining, single and multi-point cutting tools, tool geometry and materials, tool life and wear; economics of machining; principles of non-traditional machining processes; principles of work holding, principles of design of jigs and fixtures
6. **Metrology and Inspection:** Limits, fits and tolerances; linear and angular measurements; comparators; gauge design; interferometry; form and finish measurement; alignment and testing methods; tolerance analysis in manufacturing and assembly.
7. **Computer Integrated Manufacturing:** Basic concepts of CAD/CAM and their integration tools.
8. **Production Planning and Control:** Forecasting models, aggregate production planning, scheduling, materials requirement planning.
9. **Inventory Control:** Deterministic and probabilistic models; safety stock inventory control systems.
10. **Operations Research:** Linear programming, simplex and duplex method, transportation, assignment, network flow models, simple queuing models, PERT and CPM.

Note: Question paper will be consisting of two questions from each specialization. Total four questions have to be solved. One question from each specialization is compulsory.

M. TECH. ELECTRICAL ENGG. (POWER SYSTEM, CONTROL SYSTEM)

1) Analog and Digital Electronics: Simple active filters, combinational and sequential logic circuits, VCOs and timers, multiplexer, Schmitt trigger, hold and sample circuits, multi-vibrators, D/A and A/D converters, architecture, 8-bit microprocessor basic, programming and interfacing, characteristics of diodes, FET,BJT, amplifiers-biasing, oscillators and feedback amplifiers, frequency response and equivalent circuit, operational amplifiers-characteristics and applications.

2) Electrical Machines: Armature reaction and communication, three phase induction motors-principle, starting and speed control, types, performance characteristic, single phase induction motors, regulation and parallel operation of generators, synchronous machines-

performance, servo and stepper motors, regulation and parallel operation of generators, , motor starting, single phase transformer-equivalent circuit, tests, phasor diagram regulation and efficiency, parallel operation, three phase transformers-connections, windings, generator characteristics, auto-transformer, energy conversion principles, DC machines-types.

3) Electric Circuits and Fields: Three phase circuits, two-port networks, Gauss theorem, line, electric field and potential due to point, plane and spherical charge distributions, Thevenin's, Norton's , superposition and maximum power transfer theorem, Biot-Savart and Ampere's laws, dielectrics, inductance, capacitance, network graph, KVL, KCL, mesh and node analysis, situational steady-state analysis, transient response of A/C and D/C network, resonance, ideal current and voltage sources, basic filter concepts.

4) Power Electronics and Drives: Triggering circuits, bridge converters-fully controlled and half controlled, phase control rectifiers, principles of choppers and inverters, semiconductor power diodes, basis concepts of adjustable speed Ac and Dc drivers.

5) Electrical and Electronic Measurements: Energy and power factors, digital voltmeters and multimeters, instrument transformers, time, phase and frequency measurement, oscilloscopes, potentiometric recorders, Q-meters, error analysis, bridges and potentiometers, moving iron, PMMC, dynamometer and induction type instruments, power, current, measurement of voltage.

6) Signal and Systems: Time-invariant and causal systems, sampling and theorem, Fourier series representation of continuous periodic signals, Laplace and Z transforms, shifting and scaling operations, representation of continuous and discrete-time signals, linear.

7) Control systems: Root loci, lead and lead-lag compensation, bode plots, leg, state space model, controllability and absorbability, principles of feedback, block diagrams, transfer function, steady-state errors, Routh and Nyquist techniques.

OR

8) Power Systems: Economic operation, fault analysis, symmetrical components, principle of over-current, solid state relays and digital protection, differential and distance protection, HVDC transmission and FACTS concepts, circuit breakers, basic power generation concepts, system stability concepts, transmission line models and performance, swing curves and equal area criterion, cable performance, corona and radio interference, insulation, distribution systems, bus impedance and admittance matrices, per-unit quantities, load flow, power factor correction, voltage control.

NOTE: TOPICS 1 TO 6 ARE COMMON FOR M.TECH. ELECTRICAL CONTROL SYSTEMS AND POWER SYSTEMS ENTRANCE TEST.

TOPIC 7 IS FOR CONTROL SYSTEMS AND TOPIC 8 IS FOR POWER SYSTEMS STREAM.

M. TECH. ELECTRONICS

1) Network –Network graphs, Matrices ordinary differential equation Laplace transform, convolution, Nodal and mesh analysis, Time and freq. domain response. Two port network parameters.
2) Control system – transfer functions, block diagram reduction techniques, signal flow graphs, basic control components, transient and steady state responses, stability of linear systems, Routh Harvitz criterion, frequency response, Nyquist criterion, Bode plot, PID control compensating techniques.
3) Analog circuits –Biasing transistor and FET amplifiers, single and multistage feedback, differential, operational, wide band amplifier, oscillators-- LC, crystal, relaxation, functions generators, and wave shaping circuit; power supply. Timers, PLLs , F to V, V to F , I to V , V to I converters
4) Digital circuits –Boolean functions ,gates, digital IC families, combinational circuits, arithmetic circuits, code converters, multiplexers and decoders, sequential circuit, latches and flip flops, counters and shift register, comparators timers, ADCs , DACs, semiconductor memories, Architecture, programming of 8085/8086 microprocessors. Processor peripherals and interfacing, micro controller basics, Data structure, searching and sorting algorithms
5) Communicating system – Fourier transform, spatial analysis, signal transmission through lines, time invariant system, random signals, Linear and angle modulating system, superhetro-dyne receivers, sampling theorems in time and frequency domain, pulse code modulation, Companding, spread spectrum techniques, DPCM, Delta modulation, linear phase FIR filters, digital modulations system FDM & TDM.
6) Signals and Systems – Definitions and properties of Laplace transform, continuous-time and discrete-time Fourier seris, continuous-time and discrete-time Fourier Transform, z-transform. Sampling theorems. Linear Time-Invariant (LTI) Systems: definitions and properties -- casuality, stability, impulse response, convoilution, poles and zeros frequency response, group delay, phase delay. Signal transmission through LTI systems. Random signals and noise: probability, random variables, probability density function, autocorrelation, power spectral density.

M. TECH. COMPUTER SCIENCE AND ENGINEERING

1) Engineering Mathematics: Elements of probability matrix algebra, numerical method interpolation root finding, differentiation and integration.
2) Discrete Structures: Sets, relation, functions, mathematical induction, counting groups, partial orders, lattices and Boolean algebra, prepositional logic.
3) Theory of computation: Regular and context free language finite state machine and pushdown automata turning machines and undesirability.
4) Computer Hardware: Logic families flip flop login function minimization techniques design of combinational and sequential circuit. Design with integrated circuit-including ROM, PLA and multiplexes, microprocessor architecture programming interfacing with memory and I/O devices, modes of data transfer and their implementation serial and parallel communication interfaces.(Detailed knowledge of 8085 microprocessor will be assumed)
5) Computer Organization : Number representation and arithmetic functional organization machine instruction misaddress modes, ALU , hardwired and micro programmed control, instruction pipeline, memory organization input/output assembly language programming.
6) Programming and data structure : Structured programming with PASCAL/C sets, graph and tree traversals, and recursion connected competent, spanning trees, shortest paths, tree balancing hashing, file structures, B-trees sorting and searching algorithm design and analysis Techniques, big ‘oh’ notation, solution of simple recurrence relation that arise in the analysis of algorithms.
7) Language Processing : Assemblers loaders linkers microprocessor text editor programming language; lexical analysis parsing scope rule and parameter passing mechanisms, syntax directed translation, run time environment, machine code generation, interpreters
8) Operating system: Batch multiprogramming and time-sharing system processes memory device and file managements virtual memory process scheduling interposes combinational I/O redirection and pipe process synchronization and concurrency, deadlocks protection.
9) Data base system: File Organization techniques: indexing, relation and network data models, normal forms, query languages. (SQL familiarity will be assumed)

* * *

Last date of receiving application for admission	**5th July 2010**
Application form fee Rs.700 for open category and Rs.500 for SC/ST category candidate	

WALCHAND COLLEGE OF ENGINEERING, SANGLI-416415

APPLICATION FOR ADMISSION TO M. TECH. PROGRAM, 2010-2011.

INSRUCTIONS TO CANDIDATES:

- Download the form from the website
- Separate application forms should be submitted if a candidate is applying for more than one program.
- Candidates awaiting the results of the qualifying exams may also apply.
- Sponsorship certificate must be filled by sponsoring authority for the sponsored candidates on the letter head of sponsor (Download format from annexure).
- Attach the photocopies of relevant certificates along with the duly filled form.
- Attach the Demand Draft of Rs. 700/- (open), Rs. 500/- (Reserved Categories) in the favor of "**Director, Walchand College of Engineering, Sangli**," with the form.
- The application should reach **"The Director, Walchand College of Engineering, Vishrambag Sangli- 416415",** before the last date notified in admission schedule.

FOR OFFICE USE

Application No. Date of Receipt:

Admission Offered:-

Date	**Programme**	**Roll no.**	**Sign. Of authorized Person**

Cancelation

Date:	**Reason:**	**Signature of authorized person**

APPLICATION FOR M. TECH. PROGRAMME IN

Tick Appropriate Box (One only)

1	M. Tech. Civil (Structural Engineering.)	
2	M. Tech. Civil (Environmental Engineering.)	
3	M. Tech. Mechanical (Design Engineering)	
4	M. Tech. Mechanical (Heat Power Engineering)	
5	M. Tech. Mechanical (Production Engineering)	
6	M. Tech. Electrical (Power System)	
7	M. Tech. Electrical (Control System)	
8	M. Tech. Electronics Engineering	
9	M. Tech. Computer science and Engineering	

Admission Type				
	GATE	Non-GATE	Sponsored	Internal

Category				
	Open	SC	ST	Religion

1. Personal Details

Name in Full (In BLOCK LETTERS) _____ (Beginning with surname)

Date of Birth _____

Sex (M/F) ☐ **Blood Group:** ☐

2. Permanent address **Address for correspondence**

Pin:	Tel. no.:
Mobile :	Email :

3. Details of Academic Qualification:

Name of Exam	University	Year of passing	No. of Attempts	Class obtained	Total Marks obtained out of (Taken together part I/II	% Marks
F.E.						
S.E.						
T.E.						
B.E.						

GATE Qualified	GATE Exam NO.	Score	Year of Passing	Discipline
if YES				

AMIE qualified (if YES give particulars)	

Details of experience and achievement **(for sponsored candidates only)**	
Place of working:	
Designation:	
Period of working:	
Paper publication:	
Technical Exhibits / models:	
Prizes & any such achievement:	

4. Father's / Guardian's Details

Father's full name and address	
Mother name	
Annual Income:	
Nationality:	

5) Whether Hostel accommodation is required: _____

6) **Declaration by the candidate:**

I hereby declare that the information given above is correct to the best of my knowledge. I undertake to observe and abide by the rules and regulation of the college.

I also declare that I have not been debarred from appearing for any examination held by Government or any statutory Examining Authority in India.

I also enclose herewith self addressed envelope along with D.D. No_____ dated_____ drawn on _____ for Rs.700/500 in favor of the Director, Walchand College of Engineering, Sangli.

Date : **(Signature of candidate)**

NOTE :

1. Only **attested copies** of relevant original certificates (Final Year Mark list and LC/TC) are to be enclosed with the application. Originals are to be produced at the time of interview; no admission will be effected unless original certificates are produced.
2. No correspondence of any sort will be entertained regarding the position of admission.
3. Incomplete applications will not be considered.
4. If a candidate reports late for admission, he/she will be considered only if there is a vacancy at the time of his/her reporting.

Classes will commence from 12th July 2010

SPONSORSHIP CERTIFICATE FROM EMPLOYING ORGANIZATION
(On the letter head of the organization)

This application of _____

_____
(Name and Address)

Working as _____in the pay scale of (Designation)

Rs._____ since _____ in our organization is herewith recommended and sponsored by us. He/She will be granted study leave with full pay and allowance for admission to the M.Tech program (Regular) for two years at Walchand college of Engineering Sangli.

If he/she is selected, he/she will be permitted to join the course from the date of commencement of the program i.e. 12th July 2010.

Date:
Postal address of
Organization

Sponsoring Authority
with signature & seal