

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

B.Tech (Electrical Engineering / Electronics & Power) – CBCS

SCHEME OF EXAMINATION

THIRD SEMESTER

Board	Subject Code	Subject	Teaching Scheme				Credit	Marks					Minimum Passing Marks	
			L	P	T/A	Total		Theory		Practical		Total	Theory	Practical
								Internal	Uni	Internal	Uni			
GS	BTCHEE301T	Electrical Engineering Mathematics	3	--	1T	4	4	30	70	--	--	100	45	
EE	BTCHEE302T	Network Analysis	3	--	1A	4	4	30	70	--	--	100	45	
EE	BTCHEE303T	Electrical Measurement & Instrumentation	3	--	1A	4	4	30	70	--	--	100	45	
EE	BTCHEE304T	Analog Devices & Circuits	3	--	1A	4	4	30	70	--	--	100	45	
EE	BTCHEE305T	Renewable Energy Studies	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE306T	Introduction to Python Programming	1	--	--	1	1	15	35	--	--	50	23	
CV	BTCHEE307T	Environmental Studies	1	--	1A	1	Audit	50*	--	--	--	Audit	--	
EE	BTCHEE302P	Network Analysis	--	2	--	2	1	--	--	25	25	50	--	25
EE	BTCHEE303P	Electrical Measurement & Instrumentation	--	2	--	2	1	--	--	25	25	50	--	25
EE	BTCHEE304P	Analog Devices & Circuits	--	2	--	2	1	--	--	25	25	50	--	25
EE	BTCHEE306P	Introduction to Python Programming	--	2	--	2	1	--	--	25	25	50	--	25
Total			17	8	1T+4A	29	24	165	385	100	100	750		

- L- Lecture , P – Practical (Half Credit Per Hour) , T – Tutorial , A- Activity , * Indicates Noncredit Subject
- For Internal 30 Marks , 15 Marks for activity and 15 Marks for CIA (Continues Internal Assessment)

(Signature)
(U-EHINWasp)

(Signature)
(A. M. Mendhe)

(Signature)
(Dr. P. T. Kamble)

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

B.Tech (Electrical Engineering / Electronics & Power) – CBCS

SCHEME OF EXAMINATION

FOURTH SEMESTER

Board	Subject Code	Subject	Teaching Scheme				Credit	Marks					Minimum Passing Marks	
			L	P	T/A	Total		Theory		Practical		Total	Theory	Practical
								Internal	Uni	Internal	Uni			
ETC	BTCHEE401T	Signal & Systems	3	--	1T	4	4	30	70	--	--	100	45	
EE	BTCHEE402T	Digital Electronics	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE403T	Electrical Machines -I	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE404T	Power System	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE405T	Electromagnetic Fields	3	--	1T	4	4	30	70	--	--	100	45	
EE	BTCHEE406T	Simulation & Programming Techniques	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE402P	Digital Electronics Lab	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE403P	Electrical Machines –I Lab	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE406P	Simulation & Programming Techniques Lab	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE407P	Internship (2 to 3 Weeks) (After –III Semester Break)	--	--	1A	1	1	--	--	50	--	50		
		Total	18	6	2T+1A	27	24	180	420	125	75	800		

- L- Lecture , P – Practical (Half Credit Per Hour) , T – Tutorial , A- Activity
- Internship : a) Students shall be allowed to undergo internship after III semester break.
b) Internal marks for internship of IV semester may be awarded after successful completion of internship.
c) 50 internal marks given shall be given as:-
i) 25 marks based on detailed report about internship along with certificate provided by company / industry.
ii) 25 marks based on presentation by student about what he /she learned during internship.

(Signature)
(H. E. Harwase)

(Signature)
(A. M. Mendhe)

(Signature)
(Dr. P. T. Konde)

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B.Tech (Electrical Engineering / Electronics & Power) – CBCS

SCHEME OF EXAMINATION

FIFTH SEMESTER

Board	Subject Code	Subject	Teaching Scheme				Credit	Marks					Minimum Passing Marks	
			L	P	T/A	Total		Theory		Practical		Total	Theory	Practical
								Internal	Uni	Internal	Uni			
EE	BTCHEE501T	Microprocessor & Microcontroller	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE502T	Control System	3	--	1A	4	4	30	70	--	--	100	45	
EE	BTCHEE503T	Power Electronics	3	--	1T	4	4	30	70	--	--	100	45	
EE	BTCHEE504T	Advanced Electrical Power System	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE505T	Professional Elective -I	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE501P	Microprocessor & Microcontroller	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE502P	Control System	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE503P	Power Electronics	--	2	--	2	1	--	--	25	25	50		25
		Total	15	6	1A+1T	23	20	150	350	75	75	650		

- L- Lecture , P – Practical (Half Credit Per Hour) , T – Tutorial , A- Activity

Professional Elective -I	
1	Electrical Machines –II
2	Power System Practice
3	Electrical Power Utilization

Dr. V. E. H. Wase

A. M. Mendhe

Dr. P. T. Kamble

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B.Tech (Electrical Engineering / Electronics & Power) – CBCS

SCHEME OF EXAMINATION

SIXTH SEMESTER

SIXTH SEMESTER														
Board	Subject Code	Subject	Teaching Scheme				Credit	Marks					Minimum Passing Marks	
			Theory		Practical			Total						
			L	P	T/A	Total			Internal	Uni	Internal	Uni		
GS	BTCHEE601T	Engineering Economics & Management	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE602T	Computer Application in Power System	3	--	1T	4	4	30	70	--	--	100	45	
EE	BTCHEE603T	Switch Gear & Protection	3	--	1T	4	4	30	70	--	--	100	45	
	BTCHEE604T	Open Elective -I	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE605T	Professional Elective –I	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE606T	Yoga & Meditation	--	2	--	2	Audit	--	--	25*	--	25*		
EE	BTCHEE602P	Computer Application in Power System	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE603P	Switch Gear & Protection	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE607P	Internship 3 to 4 Weeks (After 4 th or 5 th Semester Break/ Mini Project)	--	--	2A	2	2	--	--	50	--	50		
			15	6	2A+2T	25	21	150	350	100	50	650		

- L- Lecture , P – Practical (Half Credit Per Hour) , T – Tutorial , A- Activity, * Indicates Noncredit Subject

OpenElective -I	Professional Elective -II
1. PLC and SCADA Systems	1.Advanced Control System
2. Solar PV Systems	2. Optimization Techniques
3. Organizational Behavior	3. Electrical Drives and their Control
4. Numerical Mathematics & Probability using MATLAB	

- Internship : a) Students shall be allowed to undergo internship after 4th or 5th semester break.
b) Internal marks for internship of VI semester may be awarded after successful completion of internship.
c) 50 internal marks given shall be given as:-
i) 25 marks based on detailed report about internship along with certificate provided by company / industry.
ii) 25 marks based on presentation by student about what he /she learned during internship.

Signature
(DR. V. E. H. Wase)

Signature
(A. M. Mudhe)

Signature
Dr. P. T. Karmale

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B.Tech (Electrical Engineering / Electronics & Power) – CBCS

SCHEME OF EXAMINATION

SEVENTH SEMESTER

SEVENTH SEMESTER														
Board	Subject Code	Subject	Teaching Scheme				Credit	Marks					Minimum Passing Marks	
			L	P	T/A	Total		Theory		Practical		Total		
								Internal	Uni	Internal	Uni			
EE	BTCHEE701T	Professional Elective –III	3	--	--	3	3	30	70	--	--	100	Theory	Practical
EE	BTCHEE702T	Professional Elective –IV	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE703T	Professional Elective –V	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE704T	Open Elective-II	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE705T	Ancient Indian History	1	--	--	1	Audit	50*	--	--	--	50*		
EE	BTCHEE706P	Elective Lab –I	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE707P	Elective Lab –II	--	2	--	2	1	--	--	25	25	50		25
EE	BTCHEE708P	Project Phase: 1	--	6	--	6	3	--	--	50	--	50		25
Total			13	10	--	23	17	120	280	100	50	550		

- L- Lecture , P – Practical (Half Credit Per Hour) , T – Tutorial , A- Activity, * Indicates Noncredit Subject

Open Elective- II	Professional Elective - III	Professional Elective - IV	Professional Elective - V
1. Power Plant Engineering. 2. Fundamental of Control System 3. Testing and Maintenance of Electrical Equipment	1. Advanced Power Electronics 2. High Voltage Engineering 3. Energy Management and Audit	1. Digital Signal Processing and its Applications 2. Electrical Installation & Design 3. Flexible AC Transmission System	1. Electrical Machine Design 2. Electric and Hybrid Vehicles 3. Introduction to Smart Grid

Elective Lab I	Elective Lab II
1. HV Engineering OR 2. Electrical Drawing and Simulation	1. Electrical Installation & Design OR 2. Electrical Workshop

- Practical Based on Syllabus of respective Theory Subject (Any one practical on Virtual Lab)
- Workshop practical based on Advance Electrical Design.

(N-F-Himase)

(A.M. Mendhe)

P. J. Karule

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B.Tech (Electrical Engineering / Electronics & Power) – CBCS

SCHEME OF EXAMINATION

EIGHTH SEMESTER

EIGHTH SEMESTER														
Board	Subject Code	Subject	Teaching Scheme				Credit	Marks					Minimum Passing Marks	
			L	P	T/A	Total		Theory		Practical		Total		
								Internal	Uni	Internal	Uni		Theory	Practical
EE	BTCHEE801T	Electrical Safety & Standards.	3	--	--	3	3	30	70	---	----	100	45	
EE	BTCHEE802T	Advance Professional Elective –VI	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE803T	Advance Professional Elective –VII	3	--	--	3	3	30	70	--	--	100	45	
EE	BTCHEE804P	Project Phase : 2	--	12	--	--	6	--	--	75	75	150		75
		Total	9	12	--	9	15	90	210	75	75	450		

Teacher shall be assigned workload for Project Phase 2 .

Professional Elective -VI	Professional Elective -VII
1. Power Semiconductor Drives	1. EHVAC/ DC Transmission System
2. Electrical Distribution System	2. Power Quality

(U.E.H. Wase)

(A.M. Mendhe)

Dr. P.T. Kamble

LIST OF ELECTIVE SUBJECTS

Semester	Elective Type	Subject Title
V – Fifth Semester	Professional Elective -I	1. Electrical Machines –II
		2. Power System Practice
		3. Electrical Power Utilization
VI –Sixth Semester	Open Elective -I	1. PLC and SCADA Systems
		2. Solar PV Systems
		3. Organizational Behavior
		4. Numerical Mathematics & Probability using MATLAB
	Professional Elective -II	1. Advanced Control System
		2. Optimization Techniques
VII - Seventh Semester	Open Elective -II	3. Electrical Drives and their Control
		1. Power Plant Engineering
		2. Fundamental of Control System
	Professional Elective -III	3. Testing and Maintenance of Electrical Equipment
		1. Advanced Power Electronics
		2. HV Engineering
	Professional Elective -IV	3. Energy Management and Audit
		1. Digital Signal Processing and its Applications
		2. Electrical Installation & Design
	Professional Elective -V	3. Flexible AC Transmission System
		1. Electrical Machine Design
		2. Electric and Hybrid Vehicles
VIII - Eighth Semester	Professional Elective -VI	3. Introduction to Smart Grid
		1. Power Semiconductor Drives
	Professional Elective -VII	2. Electrical Distribution System
		1. EHVAC/ DC Transmission System
		2. Power Quality

S. S. S.
(DR. U. E. HIRWASE)

Shall
(A. M. Mendhe)

P. C. K.
Dr P. T. Kumbhar