ELECTRICAL & ELECTRONICS ENGINEERING

EVALUATION SCHEME - B.TECH 4th YEAR

SEMESTER- VII

Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KHU701 /KHU702	HSMC -1 #/ HSMC-2 #	3	0	0	30	20	50		100		150	3
2	KEE07X	**Departmental Elective-IV**	**3**	**0**	**0**	**30**	**20**	**50**		**100**		**150**	**3**
3	KEE07X	**Departmental Elective-V**	**3**	**0**	**0**	**30**	**20**	**50**		**100**		**150**	**3**
4	KOE07X	Open Elective-II	3	0	0	30	20	50		100		150	3
5	KEN751	Industrial Automation & PLC Lab	0	0	2				25		25	50	1
6	KEN752	Mini Project or Internship Assessment*	0	0	2				50			50	1
7	KEN753	Project I	0	0	8				150			150	4
8		MOOCs (Essential for Hons. Degree)											
		TOTAL	**12**	**0**	**12**							**850**	**18**

*The Mini Project or internship (4 - 6 weeks) conducted during summer break after VI semester and will be assessed during VII semester.

Department Elective - IV	**Department Elective - V**
KEN070: Power System Operation & Control	KEN071: Electric & Hybrid Vehicles
KEE070: Advanced Micro processors & Micro Controllers	KEE075: Electric drives
KEE071: Energy Conservation and Auditing	KEE077: Power System Protection
KEE072: HVDC & AC Transmission	KEE078: Deregulated Power System
KEE074: Power Quality and FACT	KEE079: Utilization of Electrical Energy & Electric Traction

SEMESTER- VIII

Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KHU801/ KHU802	HSMC-2#/HSMC-1#	3	0	0	30	20	50		100		150	3
2	KOE08X	Open Elective-III	3	0	0	30	20	50		100		150	3
3	KOE08X	Open Elective-IV	3	0	0	30	20	50		100		150	3
4	KEN851	Project II	0	0	18				100		300	400	9
5		MOOCs (Essential for Hons. Degree)											
		Total	**9**	**0**	**18**							**850**	**18**

INDUSTRIAL AUTOMATION & PLC LAB [L T P: 0 0 2]

List of Experiments: minimum 10 nos. of experiments to be performed from following sets,

A) Industrial Automation:

1. Study hardware and software platforms for DCS
2. Simulate analog and digital function blocks
3. Study, understand and perform experiments on timers and counters
4. Logic implementation for traffic Control Application
5. Logic implementation for Bottle Filling Application
6. Tune PID controller for heat exchanger using DCS
7. FBD for auto-clavable laboratory fermenter
8. Develop graphical user interface for the fermenter plant

B) PLC

1. Study hardware and software used in PLC
2. Implementation Logic Gates
3. Implementation of DOL Starter
4. Implementation of On-Delay Timer
5. Implementation of Off-Delay Timer
6. Implementation of Up-Down Counter
7. Implementation of PLC Arithmetic Instructions
8. Implementation of PID Controller

Note: - virtual lab links:

For Industrial Automation:

http://ial-coep.vlabs.ac.in/List%20of%20experiments.html?domain=Electrical%20Engineering

For PLC:

http://plc-coep.vlabs.ac.in/List%20of%20experiments.html?domain=Electrical%20Engineering