

# KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL-15

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## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING Academic Year: 2022-23 (Stream – II)

Table of Specification (ToS)		
Course Code & Name	U18EE205 & BASIC ELECTRICAL ENGINEERING	
Semester, Branch, Section	II Semester, B.Tech. – CSN-I	
	Prof. C. Venkatesh, Course Coordinator	EEE
	Sri. M. Narasimha Rao, Member	CSE (AIML) – I
	Dr. G. Sudheer Kumar, Member	CSE (AIML) – II
	Dr. G. Rajendra Naik, Member	ECE-I
	Sri. T. Praveen Kumar, Member	ECE-II
	Dr. G. Sunil Kumar, Course Co-Coordinator	ECE-III
	Dr. P. Nagarjuna Reddy, Member	ECI
Course Committee:	Sri. M. Srinivas, Member	CE

### Weightage to each unit of course content along with COs

UNIT Number with list of major topics to cover	CO	Content Weightage (%)	ESE Marks allotted
<b>UNIT-I</b> <b>DC circuits:</b> Introduction, network elements, Ohm's law, electric power, electrical energy, Kirchhoff's laws, resistances in series -voltage divider rule; resistances in parallel- current divider rule; series parallel circuit, mesh analysis, nodal analysis (T & $\pi$ network only)	<b>CO1:</b> determine voltage, current & power in electrical circuits using mesh & nodal analysis	25%	15
<b>UNIT-II</b> <b>DC network theorems (Independent sources only):</b> Introduction, superposition theorem, Thevenin's Theorem, Norton's Theorem, maximum power transfer theorem [T and $\pi$ Network only]	<b>CO2:</b> apply suitable DC network theorems to analyze T & $\pi$ networks	25%	15
<b>UNIT-III</b> <b>1- AC circuits:</b> Phasor representation of sinusoidal quantities, average and R.M.S. values of sinusoidal wave form, AC through resistor, inductor, capacitor and series R-L circuit, R-C circuit and series R-L-C circuit. <b>3- AC circuits:</b> Production of 3- voltages, voltage & current relationships of line and phase values for balanced star and delta connections.	<b>CO3:</b> find current, voltage & power in 1- & 3 - AC circuits	25%	15
<b>UNIT-IV</b> <b>Introduction to electrical machines(Qualitative treatment):</b> Construction, principle of operation & applications of 1- transformer, 3- induction motor, 1- induction motor and DC motor. <b>Electrical earthing, fuses &amp; lighting:</b> Basic concepts of earthing, fuses and lighting sources- incandescent, fluorescent, CFL & LED lamps. <b>Batteries:</b> Types of batteries	<b>CO4:</b> explain construction, working principle & applications of electrical machines; electrical earthing fuses, lighting sources, MCB & batteries.	25%	15
<b>Total</b>		<b>100%</b> (ensure 100%)	<b>60</b> (ensure 60)

### Weightage to Cognitive Domain Learning Levels (CDLL)

CDLL	Weightage (%)	Marks allotted (weightage % on max. marks)	Legend
R	08.33	05	R: Remember U: Understand Ap: Apply An: Analyze E: Evaluate C: Create
U	10.00	06	
Ap	61.67	37	
An	20.00	12	
E	-	-	
C	-	-	
<b>Total</b>	<b>100%</b>	<b>60</b>	

Table of Specifications (ToS) showing the distribution of number of questions based on CDLL covering all units of course content

**Table of Specifications for the course U18EE205**

CO (Unit)	Cognitive Domain Learning Levels (CDLL)																								Total Marks
	R-Level				U-Level				Ap-Level				An-Level				E-Level				C-Level				
	O	S	M	L	O	S	M	L	O	S	M	L	O	S	M	L	O	S	M	L	O	S	M	L	
	(1)	(2)	(3/4)	(6/8)	(1)	(2)	(3/4)	(6/8)	(1)	(2)	(3/4)	(6/8)	(1)	(2)	(3/4)	(6/8)	(1)	(2)	(3/4)	(6/8)	(1)	(2)	(3/4)	(6/8)	
CO1 (Unit-I)	1	-	-	-	2	-	-	-	-	-	-	2	-	-	-	-									15
CO2 (Unit-II)	1	-	-	-	1	-	-	-	1	-	-	2	-	-	-	-									15
CO3 (Unit-III)	1	-	-	-	2	-	-	-	-	-	-	1	-	-	-	1									15
CO4 (Unit-IV)	2	-	-	-	1	-	-	-	-	-	-	1	-	-	-	1									15
No. of Qs	5	-	-	-	6	-	-	-	-	-	-	6	-	-	-	2									-
Total Marks	5				6				1			36				12									60
Total Marks (CDLL)	5				6				37				12												60

Format of Assignment - I with CO & CDLL mapping

Format of Minor-I with CO & CDLL mapping

Format of MSE-I with CO & CDLL mapping

Format of Assignment-II with CO & CDLL mapping

Format of Minor-II with CO & CDLL mapping

Format of MSE-II with CO & CDLL mapping

Format of ESE with CO & CDLL mapping

**Signature of Course Committee members:**

**DATE:**

1.

2.

3.

4.

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6.

7.

8.

**Head, Dept. of EEE (Signature):**