Blue Print of BEE Paper

Theory Examination

1. Question paper will comprise of 6 questions, each carrying 20 marks.
2. Total 4 questions need to be solved.
3. Q.1 will be compulsory, based on entire syllabus wherein sub questions of 2 to 3 marks will be asked

1	a	Source Transformation, Star-Delta Transformation	(03 marks)
	b	Superposition Theorem Thevenin's Theorem, Norton's Theorem, Maximum Power Transfer Theorem	(03 marks)
	c	Generation of Alternating Voltage and Currents, RMS and Average Value, Form factor , Crest factor, AC through Resistance, Inductance and Capacitance	(03 marks)
	d	Series and Parallel Resonance, Q-factor and Bandwidth	(03 marks)
	e	Three Phase Voltage and Current Generation, Star and Delta connections (Balanced Load Only), Relationship between Phase and Line Currents and Voltages, Phasor Diagrams	(02 marks)
	f	Construction, Working Principle, EMF equation, Ideal and Practical Transformer, Transformer on No Load and on Load, Phasor Diagrams	(04 marks)
	g	Semiconductor Diode, Diode rectifier with Resistive Load, Half Wave, Full Wave– Center Tapped and Bridge Configuration, RMS value and Average Value of Output Voltage, Ripple factor, Rectification Efficiency	(02 marks)
2	a	Kirchhoff 's Laws, Mesh and Nodal Analysis	(06 marks)
	b	R-L , R-C and R-L-C Series and Parallel Circuits, Phasor Diagrams , Power and Power Factor	(08 marks)
	c	Construction, Working Principle, EMF equation, Ideal and Practical Transformer, Transformer on No Load and on Load, Phasor Diagrams	(06 marks)
3	a	Three Phase Voltage and Current Generation, Star and Delta connections (Balanced Load Only), Relationship between Phase and Line Currents and Voltages, Phasor Diagrams	(08 marks)
	b	Equivalent Circuit, O.C. and S.C Test, Efficiency	(06 marks)
	c	Introduction to C and L filter (No Derivation)	(02 marks)
	d	CE, CB, CC Transistor Configurations, CE Input-Output Characteristics	(04 marks)
4	a	Source Transformation, Star-Delta Transformation	(07 marks)
	b	Generation of Alternating Voltage and Currents, RMS and Average Value, Form factor , Crest factor, AC through Resistance, Inductance and Capacitance	(05 marks)
	c	Measurement of Power by Two Wattmeter Method	(04 marks)
	d	Semiconductor Diode, Diode rectifier with Resistive Load, Half Wave, Full Wave– Center Tapped and Bridge Configuration, RMS value and Average Value of Output Voltage, Ripple factor, Rectification Efficiency	(04 marks)
5	a	Thevenin's Theorem, Norton's Theorem, Maximum Power Transfer Theorem	(08 marks)
	b	R-L , R-C and R-L-C Series and Parallel Circuits, Phasor Diagrams, Power and Power Factor	(04 marks)
	c	Equivalent Circuit, O.C. and S.C Test, Efficiency	(08 marks)
6	a	Superposition Theorem	(07 marks)
	b	Series and Parallel Resonance, Q-factor and Bandwidth	(07 marks)
	c	Measurement of Power by Two Wattmeter Method	(06 marks)