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)**
	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 configuration, CE input-output characteristics	(**04 marks)**
4	a	Source transformation, star-delta transformation	**(07marks)**
	b	Generation of alternating voltage and current, RMS and average value, form factor, crest factor ,AC through resistance, inductance and capacitance	**(05marks)**

	c	Measurement of power by two wattmeter method **(04marks)**
	d	Semiconductor diod , Diod rectifier with resistive load , Half wave, full wave-centre tapped and bridge configuration, RMS value and average value of output voltage, Ripple factor,Rectification efficiency (**04 marks**)
	a	Thevenins theorem, Norton's theorem, Maximum power transform theorem **(08 marks)**
	b	R-L,R-C, and R-L-C series and parallel circuit, phasor diagram, power and power factor **(04 marks)**
	c	Equivalent circuit S.C and O.C. Test, Efficiency **(08 marks)**
	a	Superposition theorem (**07 marks)**
	b	Series and parallel resonance ,Q-factor and bandwidth **(07marks**)
	c	Measurement of power by two wattmeter method (**06 marks)**

Engineering Buddy