T.E. Electrical VI CBSGS
Power System Analysis

16·5·17
Q.P. Code : 13100

Duration – 3 Hours

Total Marks assigned to the paper- 80

N.B.:- (1) Question No.1 is compulsory.
(2) **Attempt** any **Three** questions out of remaining **five** questions.
(3) Assume suitable data if necessary and justify the same.

Q 1.	Answer the following questions.	
	A) Discuss the disadvantages of corona	05
	B) What is the significance of surge impedance loading?	05
	C) What is the rate of tower footing resistance?	05
	D) What are the various factors affecting the selection of circuit breaker?	05
Q 2 a)	Discuss the short circuit of synchronous machine at loaded condition.	10
Q 2 b)	Discuss the z-bus formation technique.	10
Q 3 a)	Discuss L-L fault in detail.	10
Q 3 b)	Determine the symmetrical component of currents in a 3 phase system , the original phasor of which are Ia = 12 +j6 , Ib = 12-j12 , Ic = -15+j10.	10
Q 4 a)	Discuss the reflection and refraction of voltage and current wave on an short circuit transmission line.	10
Q 4 b)	Explain the terms Protective characteristics, Dynamic voltage rise and rating in case of lightening arrester.	10
Q 5 a)	Explain the terms critical voltage, Visual critical voltage and corona ring.	10
Q 5 b)	Discuss the surge protection of transformer and rotating machine.	10
Q 6 a)	Discuss the corona Q-V diagram.	10
Q 6 b)	Discuss the effect of length and load power on reactive power requirement of a line.	10

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