	DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE		
	Supplementary Examination – Summer 2022		
	Course: B. Tech. **Branch : Electrical** **Semester :IV**		
	Subject Code & Name:Power System-I (BTEEC402)		
	Max Marks: 60 **Date:** **Duration: 3 Hr.**		
	Instructions to the Students: 1. *All the questions are compulsory.* 2. *The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.* 3. *Use of non-programmable scientific calculators is allowed.* 4. *Assume suitable data wherever necessary and mention it clearly.*		
		(Level/CO)	**Marks**
Q. 1	**Solve Any Two of the following.**		
A)	**Explain the working of thermal power plant with neat diagram**	(CO1)	**6**
B)	**Explain the different types of sources for energy generation**	(CO1)	**6**
C)	**Explain the working of hydro power plant with neat diagram**	(CO1)	**6**
Q.2	**Solve Any Two of the following.**		
A)	**Explain the electrical equipment's used in typical 11 KV indoor sub-station.**	(CO2)	**6**
B)	**What is alternator exciter & explain the excitation system.**	(CO2)	**6**
C)	**Explain the inductance of three phase line with unequal spacing**	(CO2)	**6**
Q. 3	**Solve Any Two of the following.**		
A)	**Explain the effect of earth on transmission line parameter**	(CO3)	**6**
B)	**Explain the types of insulators for overhead lines.**	(CO3)	**6**
C)	**Find the capacitance of the three-phase line with equilateral spacing**	(CO3)	**6**
Q.4	**Solve Any Two of the following.**		
A)	**Explain string efficiency? Enlist the methods improve string efficiency**	(CO4)	**6**
B)	**Explain the terms skin effect & proximity effect.**	(CO4)	**6**
C)	**Explain the different types of supports used in transmission lines.**	(CO4)	**6**
Q. 5	**Solve Any Two of the following**		
A)	**Find the generalized constant for Nominal-π method for medium transmission line along with the phasor diagram?**	(CO5)	**6**
B)	**What are the factor affecting corona effect? Enlist the advantages of corona.**	(CO6)	**6**

C)	Explain the calculation of sag of transmission line for unequal levels? The tower height are 30m & 90m respectively supports a transmission line a water crossing. The horizontal distance is 500m. If tension is 1600 Kg? Find the clearance of conductor & water.		(CO6)	6
	*** End ***			

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