Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

		BE - SEMESTER-IV (OLD) - EXAMINATION - SUMMER 2017	
<b>Subject Code: 140902 Date: 06/0</b>		Code: 140902 Date: 06/06/20	)17
Sı	ıbject	Name: Electrical Power	
	•	0:30 AM to 01:00 PM Total Marks:	70
	struction		
	1. 2. 3.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.	
Q.1	(a) (b)	Give comparison between thermal power plant and hydro power plant. Explain site selection of thermal power plant.	07 07
Q.2	(a) (b)	Draw neat schematic diagram of hydro power plant and lable each component. Compare overhead transmission line V/S underground transmission line.  OR	07 07
	<b>(b)</b>	Discuss advantages and disadvantages of Nuclear power stations.	07
Q.3	(a) (b)	Draw and explain combined cycle power plant. State different methods of lying cables. Explain any one in detail with it's advantages and disadvantages.	07 07
		OR	
Q.3	(a)	What is string efficiency? Explain various methods of improving string efficiency.	07
	<b>(b)</b>	Explain (1) Skin effect. (2) Proximity effect.	07
Q.4	(a)	What are the disadvantages of low power factor ? Explain methods of improving power factor.	07
	<b>(b)</b>	Derive expression for most economical power factor.  OR	07
Q.4	(a)	Derive equation for inductance of three phase line with unsymmetrical spacing. Assume transposition.	07
	<b>(b)</b>	Derive equation for capacitance of three phase line with unsymmetrical spacing. Assume transposion.	07
Q.5	(a) (b)	Write functions of all equipments used in sub- station. Enlist types of insulators and explain any two with neat sketch.	07 07
Q.5	(a) (b)	OR Explain components of Wind Energy conversion. Explain (1) Solid earthing. (2) Peterson coil earthing.	07 07

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