

<b>DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE</b> <b>Supplementary Examination – Summer 2022</b> <b>Course: B. Tech.                      Branch : Electrical Engineering                      Semester : V</b> <b>Subject Code &amp; Name: BTEEC502: POWER SYSTEM-II</b> <b>Max Marks: 60                              Date:    /    /2022                              Duration: 3 Hr.</b>			
<b>Instructions to the Students:</b> 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
<b>Q. 1</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Describe the Transmission Loss as a function of Plant generation.	<b>CO1</b>	
B)	On the system consisting of two generating plants the incremental cost in Rs/MWhr is given as $\frac{dc1}{dp1} = 0.15P1+150$ ; $\frac{dc2}{dp2} = 0.25P2 + 175$ . The system is operating on economic dispatch with $P1=P2=200$ MW and $\frac{\partial PL}{\partial P2} = 0.2$ . Find the penalty factor of plant 1.	<b>CO1</b>	
C)	Explain Transmission loss as a function of plant generation.	<b>CO1</b>	
<b>Q.2</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Explain Network Model Formulation with neat labeled diagram.	<b>CO2</b>	
B)	Explain the Gauss Siedel method with algorithm.	<b>CO2</b>	
C)	Derive the Static Load Flow equation and explain Load Flow problem.	<b>CO2</b>	
<b>Q. 3</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Explain the Method of Voltage Control in detail.	<b>CO3</b>	
B)	Explain the Excitation system in detail.	<b>CO3</b>	
C)	Distinguish between HVDC and FACTS system.	<b>CO3</b>	
<b>Q.4</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Write a short note on sequence impedance & network of transmission lines.	<b>CO4</b>	
B)	Explain Selection of Circuit Breaker in detail.	<b>CO4</b>	
C)	Explain Line to Ground fault (LG) Fault with sequence network.	<b>CO4</b>	
<b>Q. 5</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Explain Dynamics of synchronous machine of stability study.	<b>CO5</b>	
B)	Explain Power angle Equation and its importance in power system.	<b>CO5</b>	
C)	Write a short note on Electrical Power quality issue and its remedies.	<b>CO5</b>	
<b>*** End ***</b>			