

<b>DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE</b>			
<b>Winter Examination – 2022</b>			
<b>Course: B. Tech.</b>	<b>Branch :Electrical Engineering</b>	<b>Semester : V</b>	
<b>Subject Code &amp; Name: BTEEPLE504B Power Quality Issues</b>			
<b>Max Marks: 60</b>	<b>Date:08/02/2023</b>	<b>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)	Define power quality. Explain why power quality is important?		6
B)	Explain CBEMA and ITI Curve.		6
C)	Explain with neat diagram fundamental principle of protection of equipment against voltage sag.		6
<b>Q.2</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Explain Power Quality evaluation procedure with flow Chart		6
B)	Explain with neat diagram how transients are produced by capacitor switching.		6
C)	State and explain any 6 IEEE Power Quality Standard for Harmonics		6
<b>Q. 3</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Explain how Ferro resonance leads to Over voltage.		6
B)	Give the comparison of Harmonics and Transients		6
C)	What are the sources of Harmonics and explain its effects.		6
<b>Q.4</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	Explain the concept Triplen harmonics and explain its effect.		6
B)	Explain how the Lightning Phenomena leads to Over voltage Transients		6
C)	State the devices used for mitigation of overvoltage and explain any 2 with diagram.		6
<b>Q. 5</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
A)	State and explain Objectives of power Quality Monitoring.		6
B)	State and explain selection criteria for power Quality Monitoring		6

	<b>devices and state the advantages of Power Quality monitoring.</b>		
<b>C)</b>	<b>Name the equipment used for Power Quality Monitoring and explain any 2 Equipments.</b>		<b>6</b>
	<b>*** End ***</b>		

**The grid and the borders of the table will be hidden before final printing.**