Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – VI EXAMINATION – WINTER 2015

Subject Code:160103 **Date:08/12/ 2015**

Subject Name: Vibration and Noise Control

Time:2:30pm to 5:00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain the types of damping in detail	**07**
	(b)	Describe Beats phenomena along with neat sketches	**07**
Q.2	**(a)**	Explain in detail series and parallel connections. Give two examples of each	**07**
	(b)	Explain and sketch in detail the Amplitude Frequency response curve	**07**
		OR	
	(b)	Describe in detail vibration isolation	**07**
Q.3	**(a)**	Explain significance of Transmissibility	**07**
	(b)	Describe in detail support motion	**07**
		OR	
Q.3	**(a)**	Distinguish between steady state and transient state	**07**
	(b)	Explain the working principles of an accelerometer along with a neat sketch	**07**
Q.4	**(a)**	Derive the differential equations of a damped free vibration system	**07**
	(b)	Discuss and describe Logarithmic Decrement	**07**
		OR	
Q.4	**(a)**	Write a detailed note on vibration measuring instruments	**07**
	(b)	Describe magnification factor in detail	**07**
Q.5	**(a)**	Derive the equations for an under-damped system	**07**
	(b)	Write a short note on: 1. Structural damping 2. Critical damping	**07**
		OR	
Q.5	**(a)**	Derive the equations for an over-damped system	**07**
	(b)	Write a short note on frequency measuring device	**07**

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