Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– VI New. EXAMINATION – Summer 2016

Subject Code: 2163906 **Date:19/05/2016**

Subject Name: Nanomagnetism and Nanofluids

Time:10.30 am to 01.00 pm **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)**	Write a short note on types of Magnetic materials.	**07**
	(b)	Describe nano magnetic materials in detail.	**07**
Q.2	**(a)**	Explain temperature effect on magnetic materials	**07**
	(b)	Describe B-H curve of nano magnets.	**07**
		OR	
	(b)	Write a short note on properties of nano magnets.	**07**
Q.3	**(a)**	Describe nano fluid in detail.	**07**
	(b)	Explain properties on nano fluids.	**07**
		OR	
Q.3	**(a)**	Write a note on ferrofluid.	**07**
	(b)	Explain magnetization of nano fluid.	**07**
Q.4	**(a)**	Describe sol- gel technique to prepare nano magnet	**07**
	(b)	Explain step –I preparation technique for nano fluid.	**07**
		OR	
Q.4	**(a)**	Explain Solid state reaction for nano magnet.	**07**
	(b)	Write a note on step – 2 preparation technique.	**07**
Q.5	**(a)**	Explain different stability mechanism in nano fluid.	**07**
	(b)	Write note on stability evaluation method for nano fluid.	**07**
		OR	
Q.5	**(a)**	Write recent application of nano fluid and nano magnet.	**07**
	(b)	Write advance application of nano fluid and nano magnet.	**07**

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