ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Symbol of Secularism & National Integration

DEPARTMENT OF MECHANICAL ENGINEERING

CLASS:- **BEME1 & BEME2**	SEM:- **VII**
SUBJECT:- **MD-II**	DATE:- **15/09/2016**
DURATION:- **60 min.**	MARKS:- **20**

CLASS TEST 01

NB: 1. All questions are compulsory.
    2. Assume suitable data with proper justification if required.
    3. Use of standard design data book is permitted.

Q.01 Attempt any TWO: (08 Marks)

a)	Explain various types of gear tooth failures.	
b)	Write a note on: i) Hunting tooth ii) Law of gearing	
c)	Explain & Derive Lewis equation (Beam strength equation)	

Q.02 Attempt any ONE: (12 Marks)

a)	Design a Bevel Gear pair for the following specification
	    Rated Power = 25 KW
	    Input Speed = 960 rpm
	    Output = 240 rpm
	    Shafting intersecting angle = 75 degree.	

b)	A pair of helical gear is used to transmit power from electric motor rated at 200KW, 1550 rpm with reduction ratio 3.15 and helix angle is 15°. The power is to be transmitted to a rolling machine which operates at 12-14 hrs per day. Select Suitable material and design the gear using Strength criteria.	