

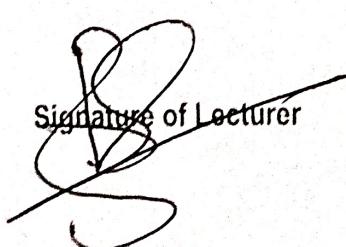
PNS SCHOOL OF ENGINEERING & TECHNOLOGY, MARSHAGHAI, KENDRAPARA  
 LESSON PLAN

DISCIPLINE-MECHANICAL, SEMESTER-4TH , SUBJECT-TOM(TH-1)

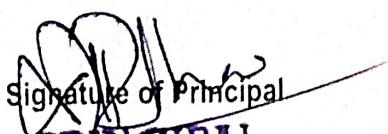
NAME OF THE FACULTY-Er. RAMESH CHANDRA PRADHAN

NO. OF HOURS ALLOTED per WEEK-4.5		NO. OF WEEKS REQUIRED-10
1ST	CHAPTER-1 Simple mechanism: Link ,kinematic pair and types (Lower pair and higher pair)	
2ND	kinematic chain, mechanism, Inversion	
3rd	four bar link mechanism and its inversion	
4th	Cams and Followers: Concept; Definition and application of Cams and Followers;	
5th	Classification of Cams and Followers	
6th	Different follower motions and their displacement diagrams like uniform velocity	
7th	Different follower motions and their displacement diagrams like SHM,uniform acceleration and Retardation;	
8th	CHAPTER-2 Power Transmission: Types of Drives – Belt, Chain, Rope, Gear drives & their comparison	
9th	; Belt Drives - flat belt, V– belt & its applications	
10th	Material for flat and V-belt; Angle of lap, Belt length. Slip	
11th	Creep; Determination of Velocity Ratio, Ratio of tight side and slack side tension	
12th	; Centrifugal tension and Initial tension; Condition for maximum power transmission	
13th	NUMERICALS SOLVED	
14th	Chain Drives – Advantages & Disadvantages; Selection of Chain & Sprocket wheels; Methods OF lubrication	
15th	Gear Drives – Spur gear terminology; Types of gears and gear trains, their selection for different applications	
16th	; Train value & Velocity ratio for compound, reverted and simple epicyclic gear train; Methods of lubrication; Law of gearing	
17th	Rope Drives – Types, applications, advantages & limitations of Steel ropes	
18th	NUMERICALS SOLVED	
19th	CHAPTER-3 Flywheel and Governors: Flywheel - Concept,	
20th	function and application of flywheel USING Iengine	
21st	; Coefficient of fluctuation of energy, Coefficient of fluctuation of speed and its significance	
22nd	Governors - Types and explanation with neat sketches	
23rd	Centrifugal GOVERNOR	

24th	Watt and Porter GOVERNOR
25th	Concept, function and applications & Terminology of Governors (sensitivity, stability)
26th	Concept, function and applications & Terminology of Governors (sensitivity, stability)
27th	Simple numerical on Watt and Porter Governor.
28th	Comparison between Flywheel and Governor
29th	CHAPTER-4 Brakes, Dynamometers, Clutches & Bearings: Function of brakes and dynamometers; Types of brakes and Dynamometers;
30th	Comparison between brakes and dynamometers
31st	Construction and working of i) shoe brake
32nd	Construction and working of ii) Band brake
33rd	NUMERICALS SOLVED
34th	Concept of Self Locking & Self energizing brakes
35th	Construction and working of i) Rope Brake Dynamometer, ii) Hydraulic Dynamometer
36th	Clutches- Uniform pressure and Uniform Wear theories; Function of Clutch and its application; Construction and working of i) Single plate clutch, ii) Multiplate clutch,
37th	iii) Centrifugal Clutch iv) Cone clutch and v) Diaphragm clutch
38th	Bearings – i) Simple Pivot, ii) Collar Bearing, iii) Conical pivot. Torque & power lost in friction (no derivation). Simple numerical.
39th	CHAPTER-5 Balancing & Vibrations: Concept of balancing
40th	; Balancing of single rotating mass;
41st	Graphical method for balancing of several masses revolving in same plane;
42nd	Concept and terminology used in vibrations,
43rd	, Causes of vibrations in machines;
44th	harmful effects and remedies.
45th	NUMERICALS SOLVED

  
Signature of Lecturer

  
Signature of H.O.D  
**HEAD OF THE DEPARTMENT**  
Department of Mechanical Engineering  
PNB School of Engg. & Tech.

  
Signature of Principal  
**PRINCIPAL**  
**PNB SCHOOL OF ENGG. & TECH.**  
Nishamani Vihar, Marhauhni