

School of Aeronautics (Neemrana)

Batch - 11

I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

B.Tech. Semester-4

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Instruments & Control Engineering	998 - MOHAMMAD SHAKIR . K	<p>Open loop and closed loop system</p> <ul style="list-style-type: none"> * Brief Introducing of both * Examples of both * Advantage & Disadvantage of both * Elements of both the systems * Comparison of both the systems. 	13-01-18
02	Instruments & Control Engineering	1001 - ASHUTOSH SINGH	<p>CRT</p> <ul style="list-style-type: none"> * Brief introduction * Construction, principle & working. * Screen for CRTs * Basic CRO circuits * Measurement of phase & frequency. 	13-01-18
03	Instruments & Control Engineering		<p>Thermocouple</p> <ul style="list-style-type: none"> * Brief Introduction * Construction of thermocouple * Principle & Working * Advantage & Disadvantages * Application 	
04	Instruments & Control Engineering		<p>LVDT</p> <ul style="list-style-type: none"> * Brief Introduction * Construction of thermocouple * Advantage & Disadvantages * Applications 	

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09	Instruments & Control Engineering		Ultrasonic Flow Transducer * Brief Introduction * Principle & operation * Properties * Applications.	
10	Instruments & Control Engineering		Study of Errors in Instruments measurements * Limiting Error * Relative limiting Error * Combination of Errors * Types of Errors	
11	Instruments & Control Engineering		Digital Voltmeter * Introduction * Types and their working * Applications	
12	Instruments & Control Engineering		Burden tubes * Brief introduction * C-type * Spiral * Twisted * Helical * Applications	

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01	Machine design	1010 - SURAJ KUMAR	Factor of safety in machine design * Definition * Selection of factor of safety * Significance of factor of safety * Function of factor of safety * Factor of safety value for different materials	20-01-18
02	Machine design	1020 - SANGAN SAHU	Power Screws * Types of screw threads used for power screw * Multiple threads * Self locking and over hauling screws * Differential and compound screws	20-01-18
03	Machine design	1022 - MIR FAID	Regenerative Breaking System * Expected points: * Meaning of Regenerative breaking system * Working Principle * Advantages * Efficiency with regenerative breaking system	20-01-18
04	Machine design	1027 - EKTA	Flat Belt Drives * Expected points: * Selection of belt drives * Material used for belts * Belt Speed * Belt joints * Power transmitted by belts	20-01-18

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09	Machine design	1028 - RAHUL KUMAR PARI	<p>Loading conditions on welded joints</p> <ul style="list-style-type: none"> * Expected points: * Lap and butt joints * Strength of transverse fillet welded joints * Strength of parallel fillet welded joints * Eccentrically loaded welded joints 	27-01-18
10	Machine design	1039- RUPESH K. SINGH	<p>Design considerations on riveted joints</p> <ul style="list-style-type: none"> * Expected points: * Method of rivets * Types of riveted joints * Failure and design of riveted joints * Applications 	27-01-18
11	Machine design	1044 - ADYUNIK ABHINAV	<p>Manufacturing considerations in machine design</p> <ul style="list-style-type: none"> * Expected points: * Manufacturing processes * Interchangeability * Basis of limit system * Roughness and measurement 	27-01-18
12	Machine design	1047 - DEEPAK RAJ PODEL	<p>Design of chain drives</p> <ul style="list-style-type: none"> * Expected points: * Terms used in chain drive * Velocity ratio of chain drives * Characteristics of roller chain drive * Maximum speed for chains * Design procedure of chain drives 	10-02-18

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01	Introduction to Aeronautics	1057 - SOMIT KUMAR	<p>Various efforts in pre-weight brother's eve to fly</p> <ul style="list-style-type: none"> * Ornithopter * Montgolfier hot air balloons * Hydrogen filled balloon by J.A.C Charles. * Sir George Cayley's design. * Cayley's model glider. * William samuel hansom's aerial steam carriage * Stringfellow's model * Due temple's airplane * Mozhaiskils aircraft * Octo lilenthal's glider * Pitcher's glider 	17-02-18
02	Introduction to Aeronautics	1063 - MUMMA REDDY NAGA P. PRASAD	<p>Classification of airplanes by configuration</p> <ul style="list-style-type: none"> * Position of wings in respect to axis of fuselage * Number of wings * Shape of wings * Position of wings 	17-02-18
03	Introduction to Aeronautics	1076 - AREEB MIRZA	<p>Classification of airplanes by power plants</p> <ul style="list-style-type: none"> * Power plant types * Number of engine * Location of engine 	17-02-18
04	Introduction to Aeronautics	1077 - DIVYA CHAUHAN	<p>Lift argumentation devices</p> <ul style="list-style-type: none"> * Devices to control camber * Devices to control the flow at leading edge * Devices to control boundary layer * Assisted lift during take off. 	03-03-18

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09	Introduction to Aeronautics	1099 - ABDULAH ALAM	<p>Stability of an Airplane</p> <ul style="list-style-type: none"> * What is stability of airplane * Static and dynamic stability * Dynamic instability during flight - Spin - Spiral - Phugoid - Dutch roll 	10-03-18
10	Introduction to Aeronautics	1104 - SHUBHAM SHARMA	<p>V-N Diagram of airplane why do we need such diagram?</p> <ul style="list-style-type: none"> * What is Load factor * What is V-N diagrams * What is requirements of V-N diagram 	10-03-18
11	Introduction to Aeronautics		<p>VTOL Aircraft</p> <ul style="list-style-type: none"> * What is VTOL * Configuration/features of such aircraft * Principle of operation of VTOL aircraft * What is a ho tail rotor aircraft? How it function? 	
12	Introduction to Aeronautics		<p>Function of a Turbo for engine?</p> <ul style="list-style-type: none"> * Schematic diagram * Identification of components * Principle operation * Thrust calculation 	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
13	Introduction to Aeronautics		<p>Different types of drag acting on airplane during flight</p> <ul style="list-style-type: none"> * Drag due to wing * Drag due to trailing vortices * Drag due to parasite surfaces * Drag due to iter borence * Drag due to shock wave/ compressibility. 	
14	Introduction to Aeronautics		<p>Mechanical properties required by materials to be used in Airplane construction</p> <ul style="list-style-type: none"> * Hardness * Elasticity * Ductility * Malleability * Strength to weight ratio * Conductivity 	
15	Introduction to Aeronautics		<p>Advanced composite structure used in modern airplane</p> <ul style="list-style-type: none"> * Advantage of use * What is advanced composite structure. * Basic component of an advanced composite structure. <ul style="list-style-type: none"> - Reintorcing materials - Type of reintorcing materials - Purpose of wing each type of materials - Matrix materials - Type of matrix materials - Purpose of using each type of materials - Core materials - Type of core materials - Purpose of using each type of material 	

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05	Introduction to Aeronautics	1080 - AMER KHAN	<ul style="list-style-type: none"> Trust arguments in engines * Thrust argumentation in piston engine * Thrust argumentation in jet engine 	03-03-18
06	Introduction to Aeronautics	1081 - ANIS KHAN	<ul style="list-style-type: none"> Various means of producing power in airplane * What is power plant * Classification of power plant - Indirect reaction power plants - principles of operations - Direct reaction power plants - principle of operations - Pure reaction power plants - principle of operations 	03-03-18
07	Introduction to Aeronautics	1083 - VIVEK ARYA	<ul style="list-style-type: none"> Classification and functioning of direct reaction power plants * Turbo jet * Turbo prop * Turbo fan * Turbo shaft * Ram jet * Pulse jet * Scram jet 	10-03-18
08	Introduction to Aeronautics	1086 - AMOD RANJAN	<ul style="list-style-type: none"> Progress in Airoscope applications * Progress in speed and altitude * Progress in space vetricles * Progress in satellites * Progress in space craft * Space shuttle 	10-03-18

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13	Machine design	1049 - ADESH KUMAR	<p>Concept of worm gears</p> <ul style="list-style-type: none"> * Expected points: * Terms used in worm gearing * Types of worm gears * Wear tooth load on worm gear * Applications * Design of worm gears 	10-02-18
14	Machine design	1050 - RAJ KUMAR	<p>Designing of internal combustion engine parts</p> <ul style="list-style-type: none"> * Expected points: * Principal parts of an I.C. engine * Design of cylinder and piston * Design of piston pin * Design procedures of crankshaft * Efficiency of I. C. Engine 	10-02-18
15	Machine design		<p>Concept of cylindrical shells</p> <ul style="list-style-type: none"> * Expected points: * Classification of pressure vessels * Stresses in thin cylindrical shell due to internal pressure * Cylindrical heads and cover plates * Stresses in compound cylindrical shells. * Thin spherical shells and their design. 	

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
05	Machine design		V-belt and rope drives * Expected points: * Types of V- belts and pulleys * Advantages and disadvantages * Rope drives concept and advantages * Wire rope fasteners	
06	Machine design		Various types of clutches in Machine design * Expected points: * Types of clutches * Positive clutches * Friction clutches * Disc plate clutches	
07	Machine design		Design of spring * Expected points * Types of spring * Material for helical spring * Buckling of compression spring * Construction of leaf spring * Standard sizes of automobile suspension springs	
08	Machine design		Designing view on spur gears * Expected points: * Involute and cycloidal teeth * Interference phenomenon * Design consideration of spur gear * Dynamic tooth load	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
13	Instruments & Control Engineering		Tachometer Generators * D.C Tachometer Generators * Advantage & Disadvantages * A.C Tachometer Generators * Applications	
14	Instruments & Control Engineering		Transducers * Introduction * Classification of transducers * Input characteristics * Transfer characteristics * Transducer response * Output characteristics * Applications	
15	Instruments & Control Engineering		RTD * Brief Introduction * Construction of RTD * Theory of RTD * Characteristics of RTD materials * Applications of RTD	

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05	Instruments & Control Engineering		<p>Wave Analyses</p> <ul style="list-style-type: none"> * Brief Introductions * Types of wave Analyzers * Principle & Working * Applications of wave Analyzers 	
06	Instruments & Control Engineering		<p>Strain gauge</p> <ul style="list-style-type: none"> * Brief Introduction * Theory of strain gauge * Types of strain gauge * Advantage & Disadvantages. 	
07	Instruments & Control Engineering		<p>Thermistors</p> <ul style="list-style-type: none"> * Brief Introduction * Construction of thermistors * Resistance-tempt. Characteristics of Thermistor. * Voltage-current & current time char of thermistor. * Salient features * Applications. 	
08	Instruments & Control Engineering		<p>Piezo-Electric Transducer</p> <ul style="list-style-type: none"> * Brief Introduction * Modes of operation * Properties of Piezo-electric crystals * Salient features * Applications. 	