

School of Aeronautics (Neemrana)

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

Ms. VARSHA

Optional B-13

B-12, 13, 14

B.Tech. Semester-5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|----------------------|--|---|----------------------------|
| 01 | Fatigue and Fracture | Reg. no. 1254 ANAS B-13 | Elements of solid Machines * Stress * Strain * Elasticity * Plasticity * Young's modulus | 24/08/2019 |
| 02 | Fatigue and Fracture | Reg. no. 1255 CHAMAN DEEP BHALLA B-13 | Common causes of failure * Yielding * Buckling * Creep * Resonance * Wear * Deflection | 24/08/2019 Chaman Deep |
| 03 | Fatigue and Fracture | Reg. no. 1256 DEEPAK kumar B-13 | Modes of Fracture * Opening mode * Sliding mode * Tearing mode | 24/08/2019 Deepak Kumar |
| 04 | Fatigue and Fracture | Reg. no. 1257 ASNIK JACOB B-13 | Griffith's Analysis for energy method * Surface energy * Energy released * Griffith's dilemma * Griffith's analysis | 31/08/2019 |

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B.Tech. Semester-5



| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|----------------------|--|---|-------------------------------------|
| 05 | Fatigue and Fracture | Reg. no. 1189 RAMAN B-13 | Crack Resistance and R-curve * Crack Resistance * R-curve for Brittle materials * R-curve for Ductile materials | 31/8/2019 <i>Raman</i> |
| 06 | Fatigue and Fracture | Reg. no. 1263 LALIT DISHMUKH B-13 | Stable and unstable crack growth * Description * G & R curve | 31/08/2019 <i>Lalit Dishmukh</i> |
| 07 | Fatigue and Fracture | Reg. no. 1268 VIVEKANAND JHA B-13 | Linear Elastic Fracture mechanics * Irwin's Assumption * Small scale yielding * Structure Analysis * Materials of LEFM | 14/9/2019 <i>Dellish Branku</i> |
| 08 | Fatigue and Fracture | Reg. no. 1278 KARNI RATHORE B-13 | Elasto plastic Fracture mechanics * Plastic deformation * Materials of EPFM * Fracture Toughness * Classification based on plastic zone | 14/09/2019 <i>Karni</i> |

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MS. VARSHA

B.Tech. Semester -5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|----------------------|---|---|--|
| 09 | Fatigue and Fracture | Reg. no. 1279 AADHAR SONWAL B-13 | Stress Intensity Factor * Axes wet to crack in a plate * Stress and displacement field * Derivation for stress intensity factor | 14/9/2019 |
| 10 | Fatigue and Fracture | Reg. no. 1183 GADDARA CHIRAI B-13 | Field equations * Equilibrium eq. relating to stress components * Strain displacement relating * Stress strain relation | 28/9/19 |
| 11 | Fatigue and Fracture | Reg. no. 1200 SOKASHI BORDIA B-13 | Airy's Function * Biharmonic differential eq. derivation * Determination of Airy's function | 28/9/19  |
| 12 | Fatigue and Fracture | Reg. no. 1299 RITUL RAS B-13 | Irwin's and Dugdale's approximation for plastic zone size * Plastic zone size * Effect crack length * Irwin approach to find plastic zone size & effective crack length * Dugdale's approach to find plastic zone size & effective crack length | 28/9/19  |

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

Ms. SONALI

B.Tech. Semester-5



| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------------|-------------------------------------|---|-----------------------|
| 01 | Vibration Engineering | Reg. No. 1170 VENKATESH B-12 | Simple Harmonic Motion <ul style="list-style-type: none">* Introduction* Basic Definition* Vector method of representing harmonic motions* Addition of two simple harmonic motions of the same frequency* Phenomenon of beats* Complex method of representing harmonic motion | 31/8/2019 P. P. P. |
| 02 | Vibration Engineering | Reg. No. 1194 ANIL KUMAR B-12 | Undamped Free Vibrations of Single Degree of Freedom System <ul style="list-style-type: none">* Introduction* Derivations of differential equations* Solution of differential equation* Torsional Vibrations* Equivalent stiffness of spring combinations* Spring in Series* Spring in Parallel* Inclined Springs | 31/8/2019 |

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

MS-SOMN41

B.Tech. Semester -5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------------|-------------------------------------|--|---|
| 03 | Vibration Engineering | Reg.no. 1205 SHAM DAS B-12 | <ul style="list-style-type: none"> * Damped Free Vibrations of Single Degree of Freedom System * Introduction * Different types of Damping * Free vibrations with viscous damping * Over Damped System * Critically Damped System * Under Damped System | 31/8/2019  |
| 04 | Vibration Engineering | Reg.no. 1214 ASAY SHARMA B-14 | <p>Viscous Dampers</p> <ul style="list-style-type: none"> * Introduction * Fluid dashpot * Eddy current damping * Dry friction or coulomb Damping * Frequency of Damped Oscillations * Rate of Decay of Oscillations * Solid or structural damping * Slip or Interfacial Damping | 14/09/2019  |

School of Aeronautics (Ajmer)

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

MS-SOMALL

B.Tech. Semester -5


| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------------|--|--|---------------------|
| 05 | Vibration Engineering | Reg. no. 1218 SAHAR SHAMBAH B-14 | <ul style="list-style-type: none"> * Forced Vibrations of Single Degree of Freedom Systems * Introduction * Forced vibrations with constant harmonic excitation * Steady Vibrations * Forced Vibration with rotating and reciprocating unbalance * Forced vibration due to excitation of the support * Absolute Amplitude * Relative Amplitude * Energy dissipated by Damping * Forced vibrations with Coulomb damping | 14/09/2019 Sahar |
| 06 | Vibration Engineering | Reg. no. 1212 HRITIK PIRTA B-14 | <ul style="list-style-type: none"> * Vibration Isolation and transmissibility * Introduction * Forced transmissibility * Motion transmissibility * Typical Isolators & mount types | 14/09/2019 |



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Ms. SONALI

B.Tech. Semester -5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------------|--|---|--|
| 07 | Vibration Engineering | Reg. No. 1234 Gompa Bhatu B-12 | Vibration Measuring Instruments * Introduction * Displacement measuring instruments or vibro meters * Velocity measuring instruments or velocity pick-ups * Acceleration measuring instruments or accelerometers * Frequency measuring Instruments | 28/9/19 Jodhpur college |
| 08 | Vibration Engineering | Reg. No. 1247 Surya Prakash D B-12 | Two Degree of Freedom Systems * Introduction * Principle modes of vibrations * Cases of simple two degree of freedom systems * Two masses fixed on a tightly stretched string * Double Pendulum * Torsional System | 28/9/19 |
| 09 | Vibration Engineering | Reg. No. 1250 Lakshay Vaid B-12 | Vibration Absorbers * Introduction * Undamped dynamic vibration absorbers * Centrifugal pendulum absorbers * Dry friction damper * Untanned viscous damper | 28/9/19  |

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------|--|--|--|
| 01 | Aircraft System | Reg. No. 1188 VANSI RAJPUT B-14 | Explain the Push Pull Rod System <ul style="list-style-type: none"> * Explain this system in detail * Figures/block diagram * Advantage/Disadvantage * Examples | 31/8/19  |
| 02 | Aircraft System | Reg. No. 1193 HIMANUSHU SHARMA B-14 | Flexible Push Pull Rod System <ul style="list-style-type: none"> * Explain in detail * Figures/ Block Diagrams * Advantage/Disadvantages * Example | 31/8/19  |
| 03 | Aircraft System | Reg. No. 1196 KAILA HITESH BHAI B-14 | Fly by wire system <ul style="list-style-type: none"> * Explain * Various component/parts/equipment required * Advantage /Disadvantages * Future scope | 31/8/19 |
| 04 | Aircraft System | Reg. No. 1199 PAUL PRAKASH B-14 | Instrument landing system <ul style="list-style-type: none"> * Explanation * Frequencies used (Marker Beacon etc) * Applications * Need to use it * Advantages over normal landing | 07/09/2019 |

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Mr. Sukumar

B.Tech. Semester-5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------|---|---|---------------------|
| 05 | Aircraft System | Reg. No. 1204 ASHISH ROHILA B-14 | VOR * Meaning VOR * Applications * Types of VOR * Difference b/w VOR & Previous frequencies being used | 07/09/19 Dell |
| 06 | Aircraft System | Reg. No. 1209 MITTAPPELLY HEMANTH B-14 | Hydraulic systems * What is Hydraulic system * Different types of Hydraulic system * Hydraulic Fluids * Uses * Precaution & Maintenance * Working Principle | 07/09/19 Hemant |
| 07 | Aircraft System | Reg. No. 1169 AARITHA CHAVRITY B-12 | Landing Gear * Working principle * Different types of landing gear * Problem faced * Different mechanism | 14/09/19 Aaritha |
| 08 | Aircraft System | Reg. No. 1220 DANNY YADAV B-12 | Retroactive landing gear * Working principle * Different between other types * Advantages/Disadvantages * Figure/ Diagram | 14/09/19 Danny |

School of Aeronautics (Neemrana)

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

Mr. SUKUMAR

B.Tech. Semester -5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|-----------------|---------------------------------------|--|------------------------|
| 09 | Aircraft System | Reg.No. 1227 ANUR KUMAR B-12 | Fuel pumps * Explain different type of fuel pumps (with figure) * Advantages * Need of these pumps | 14/9/19 Anur Kum |
| 10 | Aircraft System | Reg.No. 1221 RISHAB VERMA B-14 | Fuel Tank * Dimensions of a fuel tank (shape & size) * Fuel Inaction * Precautions * Various locations of fuel tanks along with their advantages | 21/09/19 Rishabh |
| 11 | Aircraft System | Reg.No. 1232 VISHAKH GUPTA B-14 | Fuel system * Explain the different components of a fuel system * Pumps, piping * Working principle of a fuel pump * Various problems Encountered by a fuel pump | 21/09/19 Vishakh |
| 12 | Aircraft System | Reg.No. 1236 YATIN AHLAWAT B-14 | Deicing and Anti Icing system * What do you mean by Anti icing system * Why do we need such a system | 21/9/19 Yat college |



| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|------------|------------------------------------|--|-------------------------------------|
| 01 | Propulsion | Reg. No. 1175 SUVBAM B-14 | Subsonic Inlet of Gas Turbine engine <ul style="list-style-type: none"> * What is Inlet * Stream patterns for subsonic inlet * Inlet pressure ratio * Inlet sizing * Inlet flow distortion * Inlet drag | 24/08/2019 |
| 02 | Propulsion | Reg. No. 1177 DURV B-14 | Supersonic Inlets <ul style="list-style-type: none"> * Basics of one dimensioned Inlet flow * Condition at throat * Condition at normal shock wave | 24/08/2019 18/08/2019 |
| 03 | Propulsion | Reg. No. 1184 SIDDHARTH B-14 | Exhaust nozzles <ul style="list-style-type: none"> * What is the function of exhaust nozzles * Types of nozzles * Nozzle functions * Thrust functions * Infrared signature * Nozzle coefficient * Nozzle performance | 24/08/2019 |

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MR. KODAPATI AKHIL

B.Tech. Semester-5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|------------|---|--|--|
| 04 | Propulsion | Reg. No. 1210 AADHYA GUPTA B-12 | Combustion chambers (Burners) * Types * Components * Airflow distribution and cooling * Combustion efficiency * Main burner design parameters | 07/09/2019  |
| 05 | Propulsion | Reg. No. 1213 HIMANISHU SHARMA B-12 | After Burner * Purpose * Process of after burning * Components * Diffusing * Fuel injection, automation and vaporization * Ignition * Flame stabilization | 07/09/19 |
| 06 | Propulsion | Reg. No. 1215 SOUBH PAL B-12 | Factions affecting stage processor ratio * Top speed * Axial velocity * High fluid deflection in the rotor blades | 07/09/19  |




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MR. KORAPATI ABHILASH

B.Tech. Semester-5

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|------------|---|---|-----------------------------|
| 07 | Propulsion | Reg. No. 1165 SUKRAS KUMAR B-13 | Compressibility effects in axial flow compressors * Effects of Mach number * Variation of entry Mach numbers * Shock loss * Cascade testing | 21/09/2019 <i>Dhruv</i> |
| 08 | Propulsion | Reg. No. 1174 JYUJI SHRIVASTAVA B-13 | Limiting factors in Turbine design * Centrifugal stresses * Gas bending stresses * Optimizing the design * Velocity triangles | 21/09/2019 <i>Shivam</i> |
| 09 | Propulsion | Reg. No. 1179 AASHTA TIWARI B-13 | Liquid propellant rockets * Selection of liquid propellant * Thrust control * Advantages of liquid propellant over solid propellant * Thrust equation | 21/09/2019 <i>Aashta</i> |

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|------------|---|---|--|
| 10 | Propulsion | Reg. no. 1241 SOHAMDIP B-14 | Advanced rocket propulsion Techniques * Electric Rocket propulsion * Nuclear Rocket Propulsion | 28/9/19  |
| 11 | Propulsion | Reg. no. 1245- SAUMYA RAJORA B-14 | Solid Propellant used in Rocket * Types of Propellant * Processing method of propellant * Combustion process * Advantages of using solid propeller nets | 28/9/19  |
| 12 | Propulsion | Reg. no. 1249 SHARAN SHAMBH B-14 | Explain types of turbojet compressors | 28/9/19 |
| 13 | Propulsion | | Explain all types of combustion chambers |  |
| 14 | Propulsion | | Explain about turbine nozzle diaphragm and turbine | |
| 15 | Propulsion | | Explain the function and operation of exhaust system of a jet engine | |
| 16 | Propulsion | | Explain about the purpose constructionist function of thrust reversion. | |

| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|--------------------|--------------------------------------|--|----------------------------|
| 01 | Aircraft Structure | Reg. no. 1185 VARUN VAID B-12 | Slope and Deflection * Slope of cantilever beam with point load * Deflection of cantilever beam with point load * Slope of cantilever beam with U.D.L * Deflection of cantilever beam with point load * Slope of simply supported beam with point load at centre. | 24/08/2019 Varun |
| 02 | Aircraft Structure | Reg. no. 1190 RAHUL SAINI B-12 | Double integration method * Derivation of slope and deflection * Calculation of slope and deflection for cantilever with U.D.L. * Calculation of slope and deflection for simply supported beam with U.D.L. and point load. | 24/08/2019 Rahul Saini |
| 03 | Aircraft Structure | Reg. no. 1202 GARAN DIXIT B-12 | Maculae's method * Slope of cantilever beam with point load * Deflection of cantilever beam with point load * Slope of cantilever beam with U.D.L * Deflection of cantilever beam with point load * Slope of simply supported beam with point load at centre. | 24/08/2019 Dellin Brown |

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| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|--------------------|---------------------------------------|--|----------------------------|
| 04 | Aircraft Structure | Reg.No. 1265 CHANDAN KUMAR B-13 | Area moment Theorem * Derivation of slope and deflection * Calculation of slope and deflection for cantilever with U.D.L. * Calculation of slope and deflection for simply supported beam with U.D.L. and point load. | 07/09/19 Chandana Kumar |
| 05 | Aircraft Structure | Reg.No. 1286 ANSHUL DUBEY B-13 | Statically determinate structures * Analysis of plane truss * Types of frame * Indeterminate structures * Determinate structures | 07/09/19 Anshul |
| 06 | Aircraft Structure | Reg.No. 1266 SAKSHAM ARORA B-13 | Method of joints * Supports concept * Calculation of reaction support * Calculation of force in the member * Sign notification * Tension and compression force calculation | 07/09/19 Saksham Arora |

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| S.No | Subject | Name of Student | Seminar Topic | Date of Seminar |
|------|--------------------|--|--|---|
| 07 | Aircraft Structure | Reg. No. 1238 MISHRA SURINDRA B-12 | Method of section * Supports concept * Calculation of reaction support * Calculation of force in the member * Sign notification * Tension and compressions force calculation | 21/09/2019 |
| 08 | Aircraft Structure | Reg. No. 1217 MANU THAKUR B-12 | Graphical method * Space diagram * Bow notation * Scaling of frame * Measurement of force magnitude. | 21/09/2019 |
| 09 | Aircraft Structure | Reg. No. 1244 AKSHAY LODHARA B-12 | Statically indeterminate structure * Fixed beam concept * Calculation of restoring couple * Calculation of central deflection * Calculation of deflection with offset loading * Resolution fixed and reaction force | 21/09/2019  |