School of Aeronautics (Neemrana)

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

B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Engineering Mechanics		Statics of particles and Rigid bodies * Application of low of Mechanics * Resolution of force, moments and couples * Various type of system of forces	
02	Engineering Mechanics		Variginon's and Lamis Theorem * Application of Virginia's and lames theorem * Free body diagram of bodies under equilibrium. * Condition of equilibrium.	
03	Engineering Mechanics		Virtual work * Concept of virtual work in Mechanical work. * Calculation of Active force diagram * Calculation of deflection on various beam using virtual work.	
04	Engineering Mechanics		Centroid and moment of nineties * Concept of centroid and centre of gravity * Moment of inertia using parallel axis theorem * Moment of inertia using perpendicular axis theorem * Radius of Gyration	
05	Engineering Mechanics		Calculation of Centroid and moment of inertia * Calculation for I - Section. * Calculation for T - Section. * Calculation for L - Section	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
06	Engineering Mechanics		Lifting Machines * Fundamental of lifting Machines. * Reversibility of Machine. * Law of Machines.	
07	Engineering Mechanics		System of Pulley's * Simple wheel and axis * Wheel and differential axis * Weston's different pulley	
08	Engineering Mechanics		Application of lifting Machine * To increase velocity ratio * To improve efficiency * To decrease the load and effort	
09	Engineering Mechanics		Friction * Various types of Friction * Advantage and disadvantage of friction * Application of friction on Aircraft tyres	
10	Engineering Mechanics		Friction on Loader and wedge * Variation of friction on ladder. * Load and angle of friction on Ladder * Friction on wedge shape surface	
11	Engineering Mechanics		Belt drive * Various type of belt drive. * Method to increase velocity ratio * Effect of ship on velocity ratio.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
12	Engineering Mechanics		Power transmission by belt drives * Ratio of tensions and power by flat belt drives * Ratio of tensions and power by V belt drives.	
13	Engineering Mechanics		Kinematics of particles and Rigid bodies * Type of motion * Rectangular components of velocity acceleration. * Difference between angular and transverse velocity and acceleration.	
14	Engineering Mechanics		Law of Motion * Application of newton's law of motion. * Equation of motion in rectangular coordinate. * D alembert's principle application	
15	Engineering Mechanics		Work energy and power * Work due to force, weight and spring. * Principle of work and energy. * Power calculation for lifting and rolling weights.	
16	Engineering Mechanics		Impulse and momentum * Principle of liner impulse and momentum. * Principle of angular momentum and impulse. * Conservation of angular momentum.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Engineering Chemistry-II		Types of hardness in water * Pneuanent * Formula to describe both. * Temperature * Units in terms of which it can be explained.	
02	Engineering Chemistry-II		Galvanic cell * Construction. * Working * Application	
03	Engineering Chemistry-II		Preventive measures of corrosion * Arodic * Cathodic protection	
04	Engineering Chemistry-II		Electroplating with uses. * Definition * Types of electroplating. * Role of applications	
05	Engineering Chemistry-II		Units of hardness with EDTA method * Description of all units of hardness like p.p.m. Clark, french degree of hardness with their formula and relationships. * Explain hardness causing substance along wild.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
06	Engineering chemistry-II		Lime Soda method to remove hardness in water. * All Rexes of Lime soda. * Method to Explain removed of hardness i.e. cold lime soda & hot lime soda method.	
07	Engineering chemistry-II		Acclivity and types of acclivity in water * Definition of acclivity. * Acclivity causing Ionic combination. * Calculation for detection of acclivity in water.	
08	Engineering chemistry-II		Zeolite method & reverse osmosis. * Introduction * Diagrammatic Explanation * Advantages & Disadvantages.	
09	Engineering chemistry-II		Ion exchange method and mixed bed-demineralization. * Meaning of Ion exchange. * Explanation of Technique with diagram. * Advantage and disadvantage.	
10	Engineering chemistry-II		Elector diaclasis * Elector diaclasis mean removed of salts/harness of water by electricity. (Explanation) of technique to carry out the process.) * Advantages / Disadvantages.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
11	Engineering chemistry-II		Boiler corrosion / caustic embroilment * Boiler corrosion causes. * Prevention measures. * Advantages / Disadvantages.	
12	Engineering chemistry-II		Ecosystem : Explanation for all types of ecosystem * Pond * Desert * Water * Land	
13	Engineering chemistry-II		Electrochemical cell * Principle * Construction * Working * Applications	
14	Engineering chemistry-II		Bio diversity/ Population dynamics * Basic Introduction * Formula for calculation * Explain with graph. * Utility	
15	Engineering chemistry-II		Renewable sources of energy * Sources * Applications * How they can be renewed.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
16	Engineering chemistry-II		Air pollution/hardness effects of air pollution causes * Preventive measures * Hazards	
17	Engineering chemistry-II		Global warning * Introductions * Causes Hazards * Preventive measures	
18	Engineering chemistry-II		Cause and prevention of noise corrosion. Acid rain hazardous effects and precautions. Classification of solid waste with treatment. Solid waste management	
19	Engineering chemistry-I		Rain water harvesting * Rain water harvesting technique for different methods. * Utility of R.W.H.	
20	Engineering chemistry-II		Mechanism of Electrochemical and dry corrosion with factors. * Causes of dry corrosion/Elect corrosion * Corrosion causing factors.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
21	Engineering Chemistry-II		Control of air/noise pollution. * Air pollution * Effective of pollution inhuman beings/moments building etc. * Preventive measures.	
22	Engineering chemistry-II		Corrosion causes * Corrosion causes * Factors affecting corrosion * Preventive measures.	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Communication Technique		Prepare a seminar on Elements of Communication. * Meaning of Communication * Importance of Communication * Process of Communication * Objectives of Communication * Media of Communication	
02	Communication Technique		Prepare a seminar on Components of Communication Process. * Sender * Message * Channel * Receiver * Feedback * Communication cycle * Receiving suggestions * Persuading people	
03	Communication Technique		Prepare a seminar on Media & Types of Communication * Interpersonal Communication * Intrapersonal Communication * Group Communication * Public Communication	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
04	Communication Technique		Prepare a seminar on Verbal Communication * Verbal Communication * Oral Communication * Effective oral communication * Advantages of Oral communication * Disadvantages of Oral communication * Written Communication * Advantages of Written Communication * Disadvantages of Written Communication	
05	Communication Technique		Prepare a seminar on Non – Verbal Communication * Non – verbal communication * Functions of Non – verbal communication * Proxemics * Kinesics * Chronicles * Para language * Elements of Para language * Artifacts	
06	Communication Technique		Prepare a seminar on Formal & Informal Channels of Communication * Channels of Communication * Formal Communication * Characteristics of Formal Communication * Advantages of Formal Communication * Limitations of Formal Communication	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
			* Informal Communication * Advantages of Informal Communication * Limitations of Informal Communication * Comparison between Formal & Informal communication	
07	Communication Technique		Prepare a seminar on Barriers to Communication * Barriers to Communication * Sender oriented barriers * Overcoming Sender oriented barriers * Receiver oriented barriers * Causative factors for Receiver oriented barriers Remedies for Receiver oriented barriers	
08	Communication Technique		Prepare a seminar on Professional Communication * Conceptualizing Professional Communication * Levels of Professional Communication * Downward channels of Communication * Essentials of effective downward communication * Limitations * Upward channel of communication * Problems * Effective upward communication * Horizontal channels of communication * Effective horizontal communication	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
09	Communication Technique		Prepare a seminar on Types of Professional Communication * Written communication * Types of Written communication * Oral communication * Types of Oral communication * Graphic communication * Types of Graphic communication	
10	Communication Technique		Prepare a seminar on Interpersonal Communication & methods to improve it * Meaning of Interpersonal communication * Principle & Characteristics * Functions of Interpersonal Communication * Components of Inrterpersonal communication * Direct of interpersonal communication * Mediated interpersonal communication * Conflict & communication * Conflict management * Effective interpersonal communication	
11	Communication Technique		Prepare a seminar on Subject – Verb agreement * Understanding subject – verb agreement * Use of BUT * Connective words & phrases * Steps for editing sentences * Subject & Verb * Clausal Subject * Kinds of Subjects * Other types of Concord * Recapitulation	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
12	Communication Technique		Prepare a seminar on Linking Words * Meaning of Linking words * Function of Linking words * Co –ordinating Conjunctions * Kinds of sub –ordinating conjunctions * Co- relative conjunctions * Transitional words & phrases	
13	Communication Technique		Prepare a seminar on Relative Clauses * Meaning of Relative clauses * Kinds of Subordinate clauses * Defining Relative clauses * Non- defining Relative clauses * Common mistakes * Recapitulation	
14	Communication Technique		Prepare a seminar on Resume Writing * Resume * Purpose of making Resume * Difference between Curriculum Vitae & Resume * Resume format * How to make your resume strong & positive * List of Managerial, Formal, Transferable Skills * Resume writing checklist * Words used in Resume Writing * Do’s & Don’ts	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
15	Communication Technique		Prepare a seminar on Business Letter Writing * Business correspondence * Types of letter * Personal or Social letters * Official letter * Business letters * Letter of enquiry * Letter of Complaint * Letter of Credit * General guidelines for effective business letter	
16	Communication Technique		Prepare a seminar on Types of Communication barriers * Environmental barriers * Language barriers * Psychological barriers * Physical barriers * Barriers attributable to the caller * Barriers attributable to the receiver * Conclusion	
17	Communication Technique		Prepare a seminar on Job Application Letter * Solicited Job application letter * Unsolicited Job application letter * Effective Job application letter * Writing Covering letter * Do's & Don'ts of Job application letter * Samples	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Engineering Physics-II		Compton Effect * Statement and Theory * Compton Wavelength * Direction of Recoil Electron * Kinetic Energy of Recoil Electron * Frequency and Energy of Scattered Radiation	
02	Engineering Physics-II		Schrodinger's Wave Equation * Wave Function * Time Dependent Wave Equation * Time Independent Wave Equation * Significance of Wave Equations * Physical Interpretation of Wave Function	
03	Engineering Physics-II		Particle in one dimensional Box * Normalization Condition * Boundary Value Problem * Eigne Value and Eigne Function * Energy Levels for one dimensional Box	
04	Engineering Physics-II		Application of Schrodinger's Wave Equation * A Review of Dimensional Problem * Free Particle in Three Dimensional Box (3D) * Boundary Conditions * Wave Function for 3D Problem * Energy Eigne Values * Degeneracy of Energy Level	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
05	Engineering Physics-II		Rectangular Potential Barrier * Potential Barrier Problem * Boundary Conditions * Special Cases When E<V and When E>V * Transmission Coefficient and Reflection Coefficient * Transmission Probability and Reflection Probability * Tunneling with Example	
06	Engineering Physics-II		Free Electron Gas Model * Models on Free Electron * Summer field's Theory * Density of States * Fermi Energy * Fermi Function	
07	Engineering Physics-II		Coherence * Types of Coherence * Temporal Coherence * Spatial Coherence * Coherence Length & Coherence Time * Q-Factor * Size of the Source * Visibility as the Measurement of Coherence * Real Life Examples	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
08	Engineering Physics-II		Optical Fibers * Types of Optical Fiber * Optical Fiber as Optical Wave Guide * Numerical Aperture * Acceptance Angle * Application of Optical Fiber	
09	Engineering Physics-II		LASER * Meaning of Laser * Properties of Laser * Interaction of Radiation with matter * Absorption * Spontaneous Emission * Induced Emission * Relationship between Einstein's Coefficients * Threshold Condition of Lase Action	
10	Engineering Physics-II		He-Ne LASER * Components of Laser System * Construction * Metastable State * Population Inversion * Energy Level Diagram * Working of He-Ne Laser * Advantages of He-Ne Laser * Application of He-Ne Laser	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
11	Engineering Physics-II		Holography * Holography Vs Photography * Fundamental of Holography * Construction of Holography * Reconstruction of Holography * Basic Requirements of Holographic Laboratory * Applications of Holography	
12	Engineering Physics-II		Radiation * Types of Radiation * Charged Particles * Uncharged Particles * Ionizing Radiation * Interaction of Radiation with Matter * Radiation Detectors	
13	Engineering Physics-II		Radiation Detectors * Main Components of Radiation Detectors * Gas Filled Tube Detectors * Scintillation Crystal Detectors * Solid State Semiconductors detectors * Block Diagrams	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
14	Engineering Physics-II		Gas Filled Detectors * Ionization Current Versus Voltage * Recombination Region * Ionization Chamber Region * Proportional Region * Limited Proportional Region * Geiger-Muller Region * Continuous Discharge Region	
15	Engineering Physics-II		Counters * Proportional Counter * Geiger-Muller Counter * Principle * Construction * Working * Electric Field in Counter * Efficiency of Counter * Dead Time * Resolving Time * Recovery Time * Properties	
16	Engineering Physics-II		Scintillation Counter * Principle * Scintillator Materials * Types of Scintillator * Construction * Working * Efficiency & Properties	

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B.Tech. Semester -2

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Fundamental of Computer Programmming		Storage Devices * Primary storage * Secondary storage * Tertiary storage	
02	Fundamental of Computer Program		Operating system * Concepts * Need for Operating system * Types of operating system	
03	Fundamental of Computer Program		Programming Language * Clarify the program * Design the program * Code the program * Test the program * Document & maintain the program	
04	Fundamental of Computer Program		Data Types * Basic data types * Derived data types * User defined data types	
05	Fundamental of Computer Program		Storage classes * Automatic * Register * Static * External	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
06	Fundamental of Computer Program		Standard Input & Output Function * Formatted function * Unformatted function * User defined function	
07	Fundamental of Computer Program		Control statement * Conditional * Looping * Sequence	
08	Fundamental of Computer Program		Array * 1 D Array * 2 D Array * 3 D Array	
09	Fundamental of Computer Program		Structure * Concepts * Structure within structure * Structure using typedef	
10	Fundamental of Computer Program		Pointers * Concepts * Assign value using pointer * Pointer to pointer * Pointer expression	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
11	Fundamental of Computer Program		String * Concepts * String handling function	
12	Fundamental of Computer Program		Preprocessor * Concepts * Preprocessor directive	
13	Fundamental of Computer Program		Programming Environment * Invoke TC Compiler * Editing the source program * Compilation process * Executing the program	
14	Fundamental of Computer Program		File handling * Concepts * Performing file operation * Types of files * End of file	
15	Fundamental of Computer Program		Problem solving technique * Algorithm * Flowchart * Pseudo code	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Engineering Mathematics-II		Introduction of coordinate geometry of three dimensions * Coordinates - Definition - Origin - Axes - Distance between two points - Section formula * Direction cousins and projections - Definition - Directions cosines of a line - Direction cosines of coordinate axes - Direction cuisines ratio of coordinated axes * Angle between two lines - Condition of perpendicularity (with diagram) - Condition of parallelism (with diagram)	
02	Engineering Mathematics-II		Sphere * Introduction of sphere * Definition * Equation of sphere * Plane section of sphere * Intersection of two sphere * Intersection of a sphere and line	
03	Engineering mathematics-II		Cone and cylinder * Introduction * Definition * Equation of Cone and cylinder	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
			* Introduction of right circular cone and right circular cylinder * Guiding curve * Generating line * Application of RCC	
04	Engineering Mathematics-II		Introduction of Matrix * Definition of matrix * Notation and type of matrix * Algebra of matrices * Application of matrix in science	
05	Engineering Mathematics-II		Introductions of rank * Definition of rank * Application of rank in system of 3 linear equation * Method of finding rank - Normal form method - Echelon form method	
06	Engineering Mathematics-II		Introduction of eigen value and eiger vectors * Definition and characteristics equation * Cayley-Hamiltan theorem - Statement of CHT - Application of CHT in vector calculate	
07	Engineering Mathematics-II		Introduction of vector calculus * Definition * Vector function and scalar function	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
			* Derivative of a vector function in terms of its components * Geometrical Interpretation of dr./dt * Scalar add vector fields * Gradient and divergence	
08	Engineering Mathematics-II		Introduction of differentiation and integration of vector functions * Differential operator and curl * Line integral * Surface integrals * Volume of Inlegrals Application of differentiation and Integration of vector functions	
09	Engineering Mathematics-II		Application of vector calculus * Discussed main theorem based on * Green's theorem in a plane * Gauss's and stoke theorem	
10	Engineering Mathematics-II		Fourier series * Introduction * Definitions * Orthogonal set * Periodic function * Fourier coefficients * Even and odd function	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
11	Engineering Mathematics-II		Change of Interval * Application of in Engineering problem * Half-Range series * Dirichlet condition	
12	Engineering Mathematics-II		Introduction of harmonic analysis * Definition of Harmonic Analysis * First harmonic * Second harmonic * The mode of vibrating string Application of harmonic Analysis in life	
13	Engineering Mathematics-II		Solution in series * Introduction * Definition * Power series method * Validity of the power series method - Regular function with example - Ordinary point with example - Singular point with example	
14	Engineering Mathematics-II		Introduction of partial differential equations * Definition (Basic concept) * Formation of P.D.E * Boundary value problem in Heat Equation and wave equation in one dimensional.	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
15	Engineering Mathematics-II		Introduction of partial differential equation of first order * Definition types of P.D.E * Types of methods Introduction of special type of partial differential equation * Method of solution Introduction of non linear P.D.E * Definition * Auxiliary equations * Type of method carpit method	