Scheme and Syllabus

(B Tech I Year - Common to all branches) I Semester: B.Tech.

SN	Category	Course	Course Title	Hours			Cr
		Code		L	T	P	
1	BSC	1FY2-01	Engineering	3	1	-	4
			Mathematics-I				
2	BSC	1FY2-02/	Engineering Physics/	3	1	-	4
		1FY2-03	Engineering				
			Chemistry				
3	HSMC	1FY1-04/	Communication	2	-	-	2
		1FY1-05	Skills/				
			Human Values				
4	ESC	1FY3-06/	Programming for	2	-	-	2
			Problem Solving/				
		1FY3-07	Basic Mechanical				
			Engineering				
5	ESC	1FY3-08/	Basic Electrical	2	-	-	2
		1FY3-09	Engineering/				
			Basic Civil				
			Engineering				
6	BSC	1FY2-20/	Engineering Physics	-	-	2	1
		1FY2-21	Lab/				
			Engineering				
			Chemistry Lab				
7	HSMC	1FY1-22/	Language Lab/	-	-	2	1
		1FY1-23	Human Values				
			Activities				
8	ESC	1FY3-24/	Computer	-	-	3	1.5
		1FY3-25	Programming Lab/				
			Manufacturing				
			Practices Workshop				
9	ESC	1FY3-26/	Basic Electrical	-	-	2	1
			Engineering Lab/				
		1FY3-27	Basic Civil				
			Engineering Lab				
10	ESC	1FY3-28/	Computer Aided	-	-	3	1.5
			Engineering				
		1FY3-29	Graphics/				
			Computer Aided				
			Machine Drawing				
11	SODECA	1FY8-00					0.5
					То	tal	20.5

L = Lecture, **T** = Tutorial,

P = Practical, **IA**=Internal Assessment,

ETE=End Term Exam, **Cr**=Credits

SN	Category	Course	Course Title	Hours		Cr	
		Code		L	T	P	
1	BSC	2FY2-01	Engineering Mathematics-II	3	1	-	4
2	BSC	2FY2-03/ 2FY2-02	Engineering Chemistry/ Engineering Physics	3	1	-	4
3	HSMC	2FY1-05/ 2FY1-04	Human Values/ Communication Skills	2	-	-	2
4	ESC	2FY3-07/ 2FY3-06	Basic Mechanical Engineering/ Programming for Problem Solving	2	-	-	2
5	ESC	2FY3-09/ 2FY3-08	Basic Civil Engineering/ Basic Electrical Engineering	2	-	-	2
6	BSC	2FY2-21/ 2FY2-20	Engineering Chemistry Lab/Engineering Physics Lab	-	-	2	1
7	HSMC	2FY1-23/ 2FY1-22	Human Values Activities/ Language Lab	-	-	2	1
8	ESC	2FY3-25/ 2FY3-24	Manufacturing Practices Workshop/ Computer Programming Lab	-	-	3	1.5
9	ESC	2FY3-27/ 2FY3-26	Basic Civil Engineering Lab/Basic Electrical Engineering Lab	-	-	2	1
10	ESC	2FY3-29/ 2FY3-28	Computer Aided Machine Drawing/ Computer Aided Engineering Graphics	-	-	3	1.5
11	SODECA	1FY8-00					0.5
					Тс	otal	20.5

II Semester: B.Tech.

L = Lecture, **T** = Tutorial,

P = Practical,**IA**=Internal Assessment,

ETE=End Term Exam, **Cr**=Credits

Syllabus

1FY2-01: ENGINEERING MATHEMATICS-I

CO1: To familiarize the student with functions of several variables and their derivatives that is essential in most branches of engineering.

CO2: The tool of Sequence and series (including Taylor's and Fourier series) for learning advanced Engineering Mathematics.

CO3: To acquaint the student with mathematical tools needed in evaluating multiple integrals and their usage. Apart from some applications it gives a basic introduction on Beta and Gamma functions.

CO4: To acquire fundamental knowledge of vector calculus and apply in engineering disciplines.

1FY2-01: Engineering Mathematics-I

Credit: 4

3L+1T+0P

SN	CONTENTS	Hours
1	Calculus: Improper integrals (Beta and Gamma functions) and their properties; Applications of definite integrals to evaluate surface areas and volumes of revolutions.	8
2	Sequences and Series: Convergence of sequence and series, tests for convergence; Power series, Taylor's series, series for exponential, trigonometric and logarithm functions.	6
3	Fourier Series: Periodic functions, Fourier series, Euler's formula, Change of intervals, Half range sine and cosine series, Parseval's theorem.	6
4	Multivariable Calculus (Differentiation): Limit, continuity and partial derivatives, directional derivatives, total derivative; Tangent plane and normal line; Maxima, minima and saddle points; Method of Lagrange multipliers; Gradient, curl and divergence.	10
5	Multivariable Calculus (Integration): Multiple Integration: Double integrals (Cartesian), change of order of integration in double integrals, Change of variables (Cartesian to polar), Applications: areas and volumes, Centre of mass and Gravity (constant and variable densities); Triple integrals (Cartesian), Simple applications involving cubes, sphere and rectangular parallelepipeds; Scalar line integrals, vector line integrals, scalar surface integrals, vector surface integrals, Theorems of Green, Gauss and Stokes.	10
	TOTAL	40

2FY2-01: ENGINEERING MATHEMATICS-II

CO1: To develop the essential tool of matrices and linear algebra in a comprehensive manner.

CO2: To introduce effective mathematical tools for the solutions of differential equations that model physical processes.

CO3: Equip the students to deal with power series solutions of differential equations.

CO4: To acquire fundamental knowledge of partial differential equations and apply in engineering disciplines.

2FY2-01: Engineering Mathematics-II

Credit: 4

3L+1T+0P

SN	CONTENTS	Hours
1	Matrices: Rank of a matrix, rank-nullity theorem; System of linear equations; Symmetric, skew-symmetric and orthogonal matrices; Eigenvalues and eigenvectors; Diagonalization of matrices; Cayley-Hamilton Theorem, and Orthogonal transformation.	10
2	First order ordinary differential equations: Linear and Bernoulli's equations, Exact equations, Equations not of first degree: equations solvable for p , equations solvable for y , equations solvable for x and Clairaut's type.	6
3	Ordinary differential equations of higher orders: Linear Differential Equations of Higher order with constant coefficients, Simultaneous Linear Differential Equations, Second order linear differential equations with variable coefficients: Homogenous and Exact forms, one part of CF is known, Change of dependent and independent variables, method of variation of parameters, Cauchy-Euler equation; Power series solutions including Legendre differential equation and Bessel differential equations.	12
4	Partial Differential Equations – First order: Order and Degree, Formation; Linear Partial differential equations of First order, Lagrange's Form, Non Linear Partial Differential equations of first order, Charpit's method, Standard forms.	6
5	Partial Differential Equations– Higher order: Classification of Second order partial differential equations, Separation of variables method to simple problems in Cartesian coordinates including two dimensional Laplace, one dimensional Heat and one dimensional Wave equations.	6
	TOTAL	40

1FY2-02/2FY2-02: ENGINEERING PHYSICS

CO1: To impart the knowledge of optical phenomenon including diffraction, interference, lasers and elementary idea of optical fibers and their applications.

CO2: To develop understanding of principals of quantum mechanics with exposition to Schrodinger's equation and analytical solutions in 1D and 3D.

CO3: To enrich the students about material science and semi-conductor related topics with emphasis on phenomena's like Hall Effect.

CO4: To familiarize the students with mathematical tools like curl and divergence and apply fundamental laws of Electromagnetism through Maxwell equations.

1FY2-02/ 2FY2-02: Engineering Physics

Credit: 4

3L+1T+0P

SN	CONTENTS	Hours
1	Wave Optics: Newton's Rings, Michelson's Interferometer, Fraunhofer Diffraction from a Single Slit. Diffraction grating: Construction, theory and spectrum, Resolving power and Rayleigh criterion for limit of resolution, Resolving power of diffraction grating, X-Ray diffraction and Bragg's Law.	9
2	Quantum Mechanics: Introduction to quantum Mechanics, Wave-particle duality, Matter waves, Wave function and basic postulates, Time dependent and time independent Schrodinger's Wave Equation, Physical interpretation of wave function and its properties, Applications of the Schrodinger's Equation: Particle in one dimensional and three dimensional boxes.	6
3	Coherence and Optical Fibers: Spatial and temporal coherence: Coherence length; Coherence time and 'Q' factor for light, Visibility as a measure of Coherence and spectral purity, Optical fiber as optical wave guide, Numerical aperture; Maximum angle of acceptance and applications of optical fiber.	4
4	Laser: Einstein's Theory of laser action; Einstein's coefficients; Properties of Laser beam, Amplification of light by population inversion, Components of laser, Construction and working of He-Ne and semiconductor lasers, Applications of Lasers in Science, engineering and medicine.	6
5	Material Science & Semiconductor Physics: Bonding in solids: covalent and metallic bonding, Energy bands in solids: Classification of solids as Insulators, Semiconductors and Conductors, Intrinsic and extrinsic semiconductors, Fermi dirac distribution function and Fermi energy, Conductivity in semiconductors, Hall Effect: Theory, Hall Coefficient and applications.	7
6	Introduction to Electromagnetism: Divergence and curl of electrostatic field, Laplace's and Poisson's equations for electrostatic potential, Bio-Savart law, Divergence and curl of static magnetic field, Faraday's law, Displacement current and magnetic field arising from time dependent electric field, Maxwell's equations, Flow of energy and Poynting vector.	8

1FY2-20/2FY2-20: ENGINEERING PHYSICS LAB

CO1: To develop the experimental skills in the field of optics through different experiments using devices like prism, grating and telescope.

CO2: To make an understanding of experimentation through different electrical circuit boards and learning the laws related to them.

1FY2-20/ 2FY2-20: Engineering Physics Lab

Credit: 1 0L+0T+2P

- 1. To determine the wave length of monochromatic light with the help of Michelson's interferometer.
- 2. To determine the wave length of sodium light by Newton's Ring.
- 3. To determine the wave length of prominent lines of mercury by plane diffraction grating with the help of spectrometer.
- 4. Determination of band gap using a P-N junction diode.
- 5. To determine the height of given object with the help of sextant.
- 6. To determine the dispersive power of material of a prism with the help of spectrometer.
- 7. To study the charge and discharge of a condenser and hence determine the same constant (both current and voltage graphs are to be plotted.
- 8. To determine the coherence length and coherence time of laser using He Ne laser.
- 9. To measure the numerical aperture of an optical fibre.
- 10. To study the Hall Effect and determine the Hall Voltage and Hall coefficients.

1FY2-03/2FY2-03: ENGINEERING CHEMISTRY

CO1: Demonstrate knowledge of science behind common impurities in water and methods to treat them.

CO2: Knowledge of methods to determine the calorific value of fuels, perform flue gas analysis and combustion analysis.

CO3: Apply the science for understanding corrosion and its prevention.

CO4: Knowledge of Polymer Science in different industries.

1FY2-03/ 2FY2-03: Engineering Chemistry

Credit: 4

3L+1T+0P

SN	CONTENTS	Hours
1	Water: Common impurities, hardness, determination of hardness by complexometric (EDTA method), Degree of hardness, Units of hardness Municipal water supply: Requisite of drinking water, Purification of water; sedimentation, filtration, disinfection, breakpoint chlorination.	10

	TOTAL	40
5	Organic reaction mechanism and introduction of drugs: Organic reaction mechanism: Substitution; SN1, SN2, Elecrophilic aromatic substitution in benzene, free radical halogenations of alkanes, Elimination; elimination in alkyl halides, dehydration of alcohols, Addition: electrophilic and free radical addition in alkenes, nucleophilic addition in aldehyde and ketones, Rearrangement; Carbocation and free radical rearrangements Drugs : Introduction, Synthesis, properties and uses of Aspirin, Paracetamol	7
4	Engineering Materials: Portland Cement; Definition, Manufacturing by Rotary kiln. Chemistry of setting and hardening of cement. Role of Gypsum. Glass: Definition, Manufacturing by tank furnace, significance of annealing, Types and properties of soft glass, hard glass, borosilicate glass, glass wool, safety glass Lubricants: Classification, Mechanism, Properties; Viscosity and viscosity index, flash and fire point, cloud and pour point. Emulsification and steam emulsion number.	10
3	Corrosion and its control: Definition and significance of corrosion, Mechanism of chemical (dry) and electrochemical (wet) corrosion, galvanic corrosion, concentration corrosion and pitting corrosion. Protection from corrosion; protective coatings-galvanization and tinning, cathodic protection, sacrificial anode and modifications in design.	3
2	Organic Fuels: Solid fuels: Coal, Classification of Coal, Proximate and Ultimate analyses of coal and its significance, Gross and Net Calorific value, Determination of Calorific value of coal by Bomb Calorimeter. Metallurgical coke, Carbonization processes; Otto-Hoffmann by-product oven method. Liquid fuels : Advantages of liquid fuels, Mining, Refining and Composition of petroleum, Cracking, Synthetic petrol, Reforming, Knocking, Octane number, Anti-knocking agents, Cetane number Gaseous fuels; Advantages, manufacturing, composition and Calorific value of coal gas and oil gas, Determination of calorific value of gaseous fuels by Junker's calorimeter Numerical problems based on determination of calorific value (bomb calorimeter/Junkers calorimeter/Dulongs formula, proximate analysis & ultimate and combustion of fuel.	10
	Boiler troubles: Scale and Sludge formation, Internal treatment methods, Priming and Foaming, Boiler corrosion and Caustic embrittlement Water softening; Lime-Soda process, Zeolite (Permutit) process, Demineralization process. Numerical problems based on Hardness, EDTA, Lime-Soda and Zeolite process.	

1FY2-21/2FY2-21: ENGINEERING CHEMISTRY LAB

CO1: To determine the hardness of water by HCL & EDTA methods.

CO2: Measurement of conductivity of a given sample by conductivity meter.

CO3: Study of Bomb Calorimeter.

CO4: To determine the strength of Ferrous Ammonium Sulfate & CuSO4 solutions.

CO5: To determine the viscosity of given lubricating oil by Redwood viscometer.

1FY2-21/ 2FY2-21: Engineering Chemistry Lab

Credit: 1 0L+0T+2P

- 1. Determination the hardness of water by EDTA method
- 2. Determination of residual chlorine in water
- 3. Determination of dissolved oxygen in water
- 4. Determination of the strength of Ferrous Ammonium sulphate solution with the help of K2Cr2O7 solution by using diphenyl amine indicator
- 5. Determination of the strength of CuSO4 solution iodometrically by using hypo solution
- 6. Determination of the strength of NaOH and Na2CO3 in a given alkali mixture
- 7. Proximate analysis of Coal
- 8. Determination of the flash & fire point and cloud & pour point of lubricating oil
- 9. Determination of the kinematic viscosity of lubricating oil by Redwood viscometer no. 1 at different temperature
- 10. Synthesis of Aspirin/ Paracetamol

1FY1-04/2FY1-04: COMMUNICATION SKILLS

- **CO1:** To enhance the students' communication skills.
- CO2: To improve grammatical skills of students.
- **CO3:** To improve writing abilities of students.
- **CO4:** To improve the comprehension of English language/literature.
- CO5: To improve students' English proficiency including reading and listening.

1FY1-04/ 2FY1-04: Communication Skills

Credit: 2 2L+0T+0P

SN	CONTENTS	Hours		
	Communication:			
	Meaning, Importance and Cycle of Communication. Media and Types			
1	of Communication. Verbal and Non-Verbal Communication.	5		
	Barriers to communication. Formal and Informal Channels of	5		
	Communication (Corporate Communication). Divisions of Human			
	Communication and Methods to improve Interpersonal			

	Communication. Qualities of good communication.	
2	Grammar: Passive Voice. Reported Speech. Conditional Sentences. Modal Verbs. Linking Words (Conjunctions)	5
3	Composition: Job Application and Curriculum-Vitae Writing. Business Letter Writing. Paragraph Writing. Report Writing.	5
4	Short Stories: "Luncheon" by Somerset Maugham."How Much Land Does a Man Need?" by Count Leo Tolstoy. "The Night Train at Deoli" by Ruskin Bond.	5
5	Poems: "No Men are Foreign" by James Kirkup. "If" by Rudyard Kipling. "Where the Mind is without Fear" by Rabindranath Tagore.	5
	TOTAL	25

1FY1-22/2FY1-22: LANGUAGE LAB

CO1: To improve the students' pronunciation and phonetic abilities.

CO2: To improve students' speaking skills.

CO3: To enhance the students' leadership skills, communication skills etc.

CO4: To improve the students' writing skills.

CO5: To improve students listening comprehension.

1FY2-22/ 2FY2-22: Language Lab

Credit: 1 0L+0T+2P

- 1. Phonetic Symbols and Transcriptions.
- 2. Extempore.
- 3. Group Discussion.
- 4. Dialogue Writing.
- 5. Listening comprehension.

1FY1-05/2FY1-05: HUMAN VALUES

CO1: To understand the meaning and need of value education.

CO2: To develop moral values and ethics in student's professional as well as personal life.

CO3: To understand the concept of self and body.

CO4: To make understand the meaning of harmony with oneself and also others to become a better human being.

CO5: To utilize the understanding of holistic harmony so as to create technologies for the betterment of the society.

1FY1-05/ 2FY1-05: Human Values

Credit: 2

2L+0T+0P

SN	CONTENTS	Hours
	Course Introduction - Need, Basic Guidelines, Content and	
1	Process for Value Education Understanding the need, basic guidelines, Self Exploration - its content and process; 'Natural Acceptance' and Experiential Validation, Continuous Happiness and Prosperity- Human Aspirations, Right understanding, Relationship and Physical Facilities, Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario. Method to fulfill the above human aspirations: understanding and living in harmony at various levels	5
	Understanding Harmony in the Human Being - Harmony in Myself	
2	Understanding human being as a co-existence of the sentient T and the material 'Body' Understanding the needs of Self (T) and 'Body' - Sukh and Suvidha Understanding the Body as an instrument of T',Understanding the characteristics and activities of T and harmony in T Understanding the harmony of I with the Body: Sanyam and Swasthya; correct appraisal of Physical needs, meaning of Prosperity in detail, Programs to ensure Sanyam and Swasthya.	5
	Understanding Harmony in the Family and Society- Harmony in	
3	Human-Human Relationship Understanding harmony in the Family, Understanding values in human-human relationship; meaning of Nyaya and program for its fulfillment to ensure Ubhay-tripti; Trust (Vishwas) and Respect (Samman), meaning of Vishwas; Difference between intention and competence, meaning of Samman, Difference between respect and differentiation; the other salient values in relationship, harmony in the society, Samadhan, Samridhi, Abhay, Sah-astitva as comprehensive Human Goals ,Visualizing a universal harmonious order in society- Undivided Society (AkhandSamaj), Universal Order (SarvabhaumVyawastha)- from family to world family.	5
	Understanding Harmony in the Nature and Existence - Whole	
4	existence as Coexistence Understanding the harmony in the Nature. Interconnectedness and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature. Understanding Existence as Co-existence (Sah-astitva) of mutually interacting units in allpervasive Space. Holistic perception of harmony at all levels of existence.	5
	Implications of the above Holistic Understanding of Harmony on	
5	Professional Ethics. Natural acceptance of human values Definitiveness of Ethical Human Conduct. Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order.	5

Competence in Professional Ethics: a) Ability to utilize the professional competence for augmenting universal human order, b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems, technologies and management models. Strategy for transition from the present state to Universal Human Order: At the level of individual: as socially and ecologically responsible engineers, technologists and managers. Case studies related to values in professional life and individual life. TOTAL 25

1FY1-23/2FY1-23: HUMAN VALUES ACTIVITIES

CO1: To understand the concept of right living.

CO2: To understand different technological and other problems causing threat to human life along with their probable solutions.

CO3: To understand the concept of holistic harmony through different activities.

CO4: Helping students to become better human being along with better professional.

CO5: Understanding human values through practical experiences.

1FY2-23/ 2FY2-23: Human Values Activities

Credit: 1 OL+OT+2P

PS 1:

Introduce yourself in detail. What are the goals in your life? How do you set your goals in your life? How do you differentiate between right and wrong? What have been your salient achievements and shortcomings in your life? Observe and analyze them.

PS 2:

Now-a-days, there is a lot of talk about many technogenic maladies such as energy and material resource depletion, environmental pollution, global warming, ozone depletion, deforestation, soil degradation, etc. - all these seem to be manmade problems, threatening the survival of life Earth - What is the root cause of these maladies & what is the way out in opinion?

On the other hand, there is rapidly growing danger because of nuclear proliferation, arms race, terrorism, breakdown of relationships, generation gap, depression & suicidal attempts etc. - what do you think, is the root cause of these threats to human happiness and peace - what could be the way out in your opinion?

PS 3:

1. Observe that each of us has the faculty of 'Natural Acceptance', based on which one can verify what is right or not right for him. (As such we are not properly trained to listen to our 'Natural Acceptance' and may a time it is also clouded by our strong per-conditioning and sensory attractions).

Explore the following:

- What is Naturally Acceptable' to you in relationship the feeling of respect or (i) disrespect for yourself and for others?
- What is 'naturally Acceptable' to you to nurture or to exploit others? (ii)

Is your living in accordance with your natural acceptance or different from it?

2. Out of the three basic requirements for fulfillment of your aspirations - right understanding, relationship and physical facilities - observe how the problems in your family are related to each. Also observe how much time & effort you devote for each in your daily routine.

PS 4:

list down all your important desires. Observe whether the desire is related to Self (I) or the Body. If it appears to be related to both, visualize which part of it is related to Self (I) and which part is related to Body.

PS 5:

1. a. Observe that any physical facility you use, follows the given sequence with time:

Necessary and tasteful - unnecessary but still tasteful - unnecessary and tasteless - intolerable

b. In contrast, observe that any feeling in you is either naturally acceptable or not acceptable at all. If not acceptable, you want it continuously and if not acceptable, you do not want it any moment!

2. List down all your important activities. Observe whether the activity is of 'I' or of Body or with the participation of both or with the participation of both I' and Body.

3. Observe the activities within 'i'. Identify the object of your attention for different moments (over a period of sy 5 to 10 minutes) and draw a line diagram connecting these points. Try observe the link between any two nodes.

PS 6:

- 1. Chalk out some programs towards ensuring your harmony with the body in terms of nurturing, protection and right utilization of the body.
- 2. Find out the plants and shrubs growing in and around your campus, which can be useful in curing common diseases.

PS 7:

Form small groups in the class and make them carry out a dialogue focusing on the following eight questions related to 'TRUST';

1a. Do I want to make myself happy?

- 2a. Do I want to make the other happy?
- 3a. Does the other want to make himself/herself happy?

4a. Does the other want to make me happy?

What is the answer?

Intention (Natural Acceptance)

1b. Am I able to always make myself happy?

2b. Am I able to always make the other happy?

3b. Is the other able to always make himself/herself happy?

What is the answer?

Let each student answer the questions for himself and everyone else. Discuss the difference between intention and competence. Observe whether you evaluate yourself and others on the basis of intention/competence.

PS 8:

- 1. Observe, on how many occasions, you are able to respect your related ones (by doing the right evaluation) and on how many occasions you are disrespecting by way of under-evaluation, over-evaluation or otherwise evaluation.
- 2. Also, observe whether your feeling of respect is based on treating the other as you would treat yourself or on differentiations based on body, physical facilities or belieds.

PS 9:

- 1. Write a narration in the form of a story, poem, skit or essay to clarify a salient Human Value to the children.
- 2. Recollect and narrate an incident in your life where you were able to exhibit willful adherence to balues in a difficult situation.

PS 10:

List down some common units (things) of Nature which you come across in your daily life and classify them in the four orders of Nature. Analysis and explain the aspect of mutual fulfillment of each unit with other orders.

PS 11:

Make a chart to show the whole existence as co-existence. With the help of this chart try to identify the role and the scope of some of the courses of your study. Also indicate the areas which are being either over-emphasized or ignored in the present context.

PS 12:

Identify any two important problems being faced by the society today and analyze the root cause of these problems. Can these be solved on the basic of natural acceptance of human values. If so, how should one proceed in this direction from the present situation?

PS 13:

- 1. Suggest ways in which you can use your knowledge of Science/Technology/Management etc. for moving towards a universal human order.
- 2. Propose a broad outline for humanistic Constitution at the level of Nation.

PS 14:

The course is going to be over now. It is time to evaluate what difference in your thinking it has made. Summarize the core massage of this course grasped by you. How has this affected you in terms of;

- a. Thought
- b. Behavior
- c. Work and
- d. Relization

What practical steps are you able to visualize for the transition of the society from its present state.

Project:

Every student required to take-up a social project e.g. educating children in needy/weaker section, services in hospitals, NGO's and other such work i.e. social work at villages adopted by respective institute/ college.