B.Tech.

1st and 2nd Semesters
(Common to all branches of Engineering)

Scheme & Syllabus

Effective from Session 2012-13
## Scheme of Teaching & Examination for I year B.Tech. I Semester
**Effective from the Session: 2012 – 2013**
*(Common to all branches of Engineering)*

<table>
<thead>
<tr>
<th>Sub Code</th>
<th>Subject</th>
<th>Number of Teaching Hours</th>
<th>Duration of Theory Paper (Hours)</th>
<th>Marks Allocation</th>
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<td>102</td>
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<td>Workshop Practice</td>
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*(Total 30 periods per week)*
### Scheme of Teaching & Examination for I year B.Tech II Semester
Effective from the Session: 2012 – 2013
(Common to all branches of Engineering)

<table>
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<tr>
<th>Sub Code</th>
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<th>Duration of theory Paper (Hours)</th>
<th>Marks Allocation</th>
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<td>Fundamentals of Computer Programming</td>
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<td><strong>Grand Total</strong></td>
<td>16</td>
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</table>

(Total 31 periods per week)

**Legend:**
- **L** = Lecture, **T** = Tutorial, **P** = Practical
101 COMMUNICATIVE ENGLISH

Unit 1
Grammar
1. Tenses
2. Passive Voice
3. Indirect Speech
4. Conditional Sentences
5. Modal Verbs

Unit 2
Composition
1. Dialogue Writing
2. Paragraph and Precis Writing
3. Report, its importance and Report Writing

Unit 3
Short Stories
1. The Luncheon: W.S. Maugham
2. How Much Land Does a Man Need?: Leo Tolstoy
3. The Last Leaf: O. Henry

Unit 4
Essays
1. On the Rule of the Road: A. G. Gardiner
2. The Gandhian Outlook: S. Radhakrishnan
3. Our Own Civilisation: C.E.M. Joad

Unit 5
Poems
1. The Unknown Citizen: W. H. Auden
2. The Character of A Happy Life: Sir Henry Wotton
3. No Men are Foreign: James Kirkup
4. If : Rudyard Kipling

Suggested Readings
2. English for Engineers: Made Easy, Aeda Abidi & Ritu Chaudhary, Cengage Learning, (New Delhi)
5. The Written Word , Vandana R. Singh, Oxford University Press (New Delhi)
6. The Great Short Stories edited by D.C. Datta, Ram Narain Lal Publishers (Allahabad)

102 ENGINEERING MATHEMATICS-I

Unit 1
Differential Calculus: Asymptotes (Cartesian Coordinates Only), Curvature (Cartesian Coordinates Only), Concavity, Convexity and Point of Inflexion (Cartesian Coordinates Only), Curve Tracing (Cartesian and Standard Polar Curves-Cardioids, Lemniscates of Bernoulli, Limacon, Equiangular Spiral).

Unit 2

Unit 3
Integral Calculus: Surface and Volumes of Solids of Revolution, Double Integral, Double Integral by changing into polar form, Areas & Volumes by Double Integration, Change of Order of Integration, Beta Function and Gamma Function (Simple Properties).

Unit 4
Differential Equations: Differential Equations of First Order and First Degree - Linear Form, Reducible to Linear form, Exact Form, Reducible to Exact Form, Linear Differential Equations of Higher Order with Constant Coefficients Only.

Unit 5
Differential Equations: Second Order Ordinary Differential Equations with Variables Coefficients, Homogeneous and Exact Forms, Change of Dependent Variable, Change of Independent Variable, Method of Variation of Parameters.

Suggested Readings


103 ENGINEERING PHYSICS-I

Unit 1

Interference of light

Unit 2

Polarization of light
Plane circular and elliptically polarized light on the basis of electric (light) vector, Malus law. Double Refraction: Qualitative description of double refraction phase retardation plates, quarter and half wave plates, construction, working and use of these in production and detection of circularly and elliptically polarized light. Optical Activity: Optical activity and laws of optical rotation, Specific rotation and its measurement using half-shade and bi-quartz devices.

Unit 3

Diffraction of light

Unit 4

Elements of Material Science

Unit 5

Special Theory of Relativity
Postulates of special theory of relativity, Lorentz transformations, relativity of length, mass and time. Relativistic velocity addition and mass-energy relation, Relativistic Energy and momentum.

Suggested Readings

104 ENGINEERING CHEMISTRY

Unit 1

Unit 2
Fuels Analyses: Ultimate and proximate analysis of coal, Determination of calorific value of solid and gaseous fuels by bomb and Junker’s Calorimeter respectively. Calculations of calorific value based on Dulong’s formula. Combustion, requirement of oxygen/ air in combustion process. Flue gas analysis by Orsat’s apparatus and its significance.

Unit 3

Unit 4
Cement: Definition, Composition, basic constituents and their significance, Manufacturing of Portland cement by Rotary Kiln Technology, Chemistry of setting and hardening of cement and role of gypsum.
Glass: Definition, Properties, Manufacturing of glass and importance of annealing in glass making. Types of silicate glasses and their commercial uses, Optical fiber grade glass.

Unit 5
Refractory: Definition, classification, properties, Requisites of good refractory and manufacturing of refractory. Preparation of Silica and fire clay refractory with their uses. Seger’s (Pyrometric) Cone Test and RUL Test
Lubricants: Introduction, classification and uses of lubricants. Types of lubrication. Viscosity & viscosity index, flash and fire point, cloud and pour point, steam emulsification number, precipitation number and neutralization number.
Suggested Readings

1. The Chemistry and Technology of Coal, by J G Speigh, CRC Press
2. The Chemistry and Technology of Petroleum, by J G Speigh, CRC Press
3. Polymer Chemistry: An Introduction, Malcolm P. Stevens, Oxford University Press
5. Lubricants and Lubrications, Theo Mang, Wilfied, Wiley-VCH

105 BASIC ELECTRICAL & ELECTRONICS ENGINEERING

Unit 1


Unit 2

Alternating Quantities: Introduction, Generation of AC Voltages, Root Mean Square and Average Value of Alternating Currents and Voltages, Form Factor and Peak Factor, Phasor Representation of Alternating Quantities, Single Phase RLC Circuits, Introduction to 3-Phase AC System.

Unit 3

Rotating Electrical Machines; DC Machines: Principle of Operation of DC Machine as Motor and Generator, EMF Equation, Applications of DC Machines.
AC Machines: Principle of Operation of 3-Phase Induction Motor, 3-Phase Synchronous Motor and 3-Phase Synchronous Generator (Alternator), Applications of AC Machines.

Unit 4


Unit 5

Instrumentation: Introduction to Transducers: Thermocouple, RTD, Strain Gauges, Load Cell and Bimetallic Strip.
Introduction and classification of ICs.

Suggested Readings

1. Electrical and Electronic Technology by Edward Hughes et al, Pearson Publication
2. Basic Electrical & Electronics Engineering by V. Jagathesan, K. Vinod Kumar & R. Saravan Kumar, Wiley India.
4. Basic Electrical and Electronics Engineering by Muthusubramaniam, TMH
6. Fundamentals of Electrical and Electronics Engineering by Ghosh, Smarajit, PHI India
7. Basic Electrical & Electronics Engineering by Ravish Singh, TMH
8. Basic Electronics Engineering by Vijay Baru et al, Dream Tech, New Delhi

106 ENGINEERING PHYSICS LAB-I

1. To determine the wave length of monochromatic light with the help of Fresnel’s biprism.
2. To determine the wave length of sodium light by Newton’s Ring.
3. To determine the specific rotation of Glucose (Sugar) solution using a polarimeter.
4. To determine the wave length of prominent lines of mercury by plane diffraction grating with the help of spectrometer.
5. To convert a Galvanometer in to an ammeter of range 1.5 amp. and calibrate it.
6. To convert a Galvanometer in to a voltmeter of range 1.5 volt and calibrate it.
7. To study the variation of a semiconductor resistance with temperature and hence determine the Band Gap of the semiconductor in the form of reverse biased P-N junction diode.
8. To study the variation of thermo e.m.f. of iron copper thermo couple with temperature.

107 ENGINEERING CHEMISTRY LAB

1. Proximate analysis of solid fuel.
2. Experiments based on Bomb Calorimeter.
3. To determine the strength of Ferrous Ammonium sulphate solution with the help of K_2Cr_2O_7 solution.
4. To determine the strength of CuSO_4 solution with the help of hypo solution.
5. To determine the strength of NaOH and Na_2CO_3 in a given alkali mixture.
6. Determination of Na/K/Ca by flame photometer in a given sample.
7. Determination of turbidity in a given sample.
8. To determine the flash and fire point of a given lubricating oil.
9. To determine the viscosity of a given lubricating oil by Redwood viscometer.
10. To determine cloud and pour point of a given oil.
108 ELECTRICAL AND ELECTRONICS LAB

Electrical lab
1. Assemble house wiring including earthing for 1-phase energy meter, MCB, ceiling fan, tube light, three pin socket and a lamp operated from two different positions. Basic functional study of components used in house wiring.
2. Prepare the connection of ceiling fan along with the regulator and vary the speed.
3. Prepare the connection of single phase induction motor through 1-Phase Auto-transformer and vary the speed.
4. Prepare the connection of three phase squirrel cage induction motor through 3-Phase Auto-transformer and vary the speed.
5. Prepare the connection of Fluorescent Lamp, Sodium Vapour and Halogen Lamp and measure voltage, current and power in the circuit.

Electronics lab
1. Identification, testing and application of Resistors, Inductors, Capacitors, PN-Diode, Zener Diode, LED, LCD, BJT, Photo Diode, Photo Transistor, Analog/Digital Multi-Metres and Function/Signal Generator.
2. Measure the frequency, voltage, current with the help of CRO.
3. Assemble the single phase half wave and full wave bridge rectifier & the analyse effect of L, C and L-C filters in rectifiers.
4. Study the BJT amplifier in common emitter configuration. Measure voltage gain plot gain frequency response and calculate its bandwidth.
5. Verify the truth table of AND, OR, NOT, NOR and NAND gates.

109 PRACTICAL GEOMETRY

1. (a) Lines, Lettering & Dimension (Sketch Book)
(b) Scale-representative Fraction, Plan scale, Diagonal Scale, Vernier scales (In sheet) comparative Scale, & scale of chords (Sketch Book)
2. (a) Conic Section:-
     Construction of Ellipse, Parabola & Hyperbola by different methods (In sheet)
(b) Engineering curves:-
     Construction of cycloid, Epicycloids, Hypocycloid and Involutes (In sheet) Archimedean and Logarithmic spiral, (Sketch book)
3. (a) Type of Projection, Orthographic Projection: First Angle and third Angle Projection (Sketch Book)
(b) Projection of Points (Sketch Book)
(c) Projection of Straight lines, different position of Straight lines, methods for determining True length, true inclinations and Traces of straight lines (Four problems in sheet and three problems in (Sketch Book)
(d) Projection of Planes: Different positions of Plane lamina like:- Regular polygon, circle three of planes (Four problems in Drawing sheet and three problems in Sketch Book.)
4. (a)Projection of Solids:- Projection of right and regular Polyhedron, Prisms, Pyramids and cone (Four Problem in Drawing sheet and there in Sketch Book.)
(b) Section of Solids:- Projection of Frustum of a cone and pyramid, Projection of Truncated Solids (like Prism, Pyramid, Cylinder and Cone) in different positions.

5. (a) Development of Surfaces:- Parallel line and Radial line method for right, regular solids
(b) Isometric Projections:- Isometric Scales, Isometric Axes, Isometric Projection of Solids.

Suggested Readings


110 WORKSHOP PRACTICE

Carpentry Shop
1. T – Lap joint
2. Bridle joint

Foundry Shop
1. Mould of any pattern
2. Casting of any simple pattern

Welding Shop
1. Gas welding practice by students on mild steel flat
2. Lap joint by gas welding
3. MMA welding practice by students
4. Square butt joint by MMA welding
5. Lap joint by MMA welding
6. Demonstration of brazing

Machine Shop Practice
1. Job on lathe with one step turning and chamfering operations
2. Job on shaper for finishing two sides of a job
3. Drilling two holes of size 5 and 12 mm diameter on job used / to be used for shaping
4. Grinding a corner of above job on bench grinder

Fitting and Smithy Shop
1. Finishing of two sides of a square piece by filing
2. Tin smithy for making mechanical joint and soldering of joint
3. To cut a square notch using hacksaw and to drill three holes on PCD and tapping

Suggested Readings

2. Elements of Workshop Technology Hajra & Choudhary, Media Promoters & Publisher.

111 DISCIPLINE & EXTRA CURRICULAR ACTIVITIES (DECA)

Component – A

Discipline:

25 Marks
The marks shall be deducted from this component for those who shall involve themselves in indiscipline/undesirable/Ragging activities or in case of penalty of marks imposed by Standing Disciplinary Committee (SDC) and approved by Head of the Institution concerned subject to a maximum of 25 marks.

Component – B Extra Curricular Activities: 25 Marks

Marks shall be awarded for the participation of students in various Extra Curricular Activities organised by the respective institutions as per the following, subject to a maximum of 25 marks. In case student does not participate in any of the Extra Curricular Activities, he/ she shall be awarded zero(0) marks in DECA - Component B.

(i) National Cadet Corps (NCC).
(ii) National Service Scheme (NSS)
(iii) Scouts & Guide
(iv) Sports Activities
(v) Literary Activities & model
(vi) Cultural Activities
(vii) Paper Presentation/ Participation in National Conferences/ Seminars/ Workshops etc.
(viii) Blood Donation
(ix) Participation in activities of College Annual day Celebration
(x) Organising/ Participation/ Volunteer in different activities organised by the departments/ institute
(xi) Organising/ Participation in activities of Students Chapters of ISTE, IE (I), IEEE, IETE, Vivekanand Kendra etc.

201 COMMUNICATION TECHNIQUES

Unit 1

Elements of Communication
1. Communication: Meaning, Importance and Process
2. Objectives of Communication
3. Media and Types of Communication

Unit 2

Basics of Communication
1. Verbal and Non-Verbal Communication
2. Formal and Informal Channels of Communication
3. Qualities of Good Communication

Unit 3

Skills of Communication
1. Barriers to Communication
2. Professional Communication
3. Interpersonal Communication and methods to improve it

**Unit 4**

**Grammar**
1. Subject-Verb Agreement (Concord)
2. Linking Words (Conjunctions)
3. Relative Clauses
4. Common Errors

**Unit 5**

**Composition**
1. Resume Writing
2. Business Letter Writing: Sales, Credit, Enquiry, Order, Claim, Complaint, Job Applications, etc.
3. E-mail messages
4. Telephone Etiquettes

**Suggested Readings**
1. Communication Skills for Engineers and Scientists, Sangeeta Sharma and Binod Mishra, PHI Learning Pvt. Ltd. (New Delhi)
2. English Grammar and Composition, Gurudas Mukherjee, Ane Books Pvt. Ltd. (New Delhi)
4. Effective Technical Communication, M Ashraf Rizvi, Tata McGraw Hill (New Delhi)

**202 ENGINEERING MATHEMATICS-II**

**Unit 1**


**Unit 2**

Matrices: Rank of a matrix, Rank of matrix by reducing to normal forms, Consistency of systems of linear simultaneous equations and its solution, Eigen values and Eigen vectors, Cayley-
Hamilton theorem (without proof), Diagonalization of matrix.

Unit 3


Unit 4

Application of Vector Calculus: Green’s Theorem in a Plane, Gauss’s and Stoke’s Theorem (without proof) and their Applications. Fourier Series: Expansion of simple functions in Fourier Series, half range Fourier sine and cosine series, change of interval. Harmonic Analysis.

Unit 5


Suggested Readings

5. Mathematics for Engineers, Chandrika Prasad, Prasad Mudranalaya Allahabad.
6. Advanced Mathematics for Engineers, Chandrika Prasad, Prasad Mudranalaya Allahabad.

203 ENGINEERING PHYSICS-II

Unit 1

Quantum Mechanics: Compton effect & quantum nature of light, Derivation of time dependent and time independent Schrödinger’s Wave Equation, Physical interpretation of wave function and its properties, boundary conditions, Particle in one-dimensional box.

Unit 2

Applications of Schrödinger’s Equation, Particle in three-dimensional box and Degeneracy, Barrier penetration and tunnel effect, Tunneling probability, Alpha Decay, Summerfield’s Free electron gas model Postulates, Density of energy states, Fermi energy level.

Unit 3

Coherence and Optical Fibres, Spatial and temporal coherence, Coherence length, Coherence time and ‘Q’ factor for light, Visibility as a measure of coherence, Spatial Coherence and size of the source, Temporal coherence and spectral purity, Optical fiber as optical wave-guide, Numerical aperture, maximum angle of acceptance and applications of Optical Fiber.
Unit 4
Lasers and Holography: Theory of laser action, Einstein’s coefficients, Components of a laser, Threshold conditions for laser action; Theory, Design and applications of He-Ne and semiconductor lasers; Holography versus photography, Basic theory of holography, Basic requirement of a holographic laboratory; Applications of holography in microscopy and interferometry.

Unit 5

Suggested Readings

204 CHEMISTRY & ENVIRONMENTAL ENGINEERING

Unit 1

Unit 2
Water Treatment: Softening of water, Lime-Soda, Permutit (Zeolite) and Deionization (Demineralization) methods, Boiler troubles their causes, disadvantages and prevention: Formation of solids (Scale and Sludge), Carry over (Priming and Foaming), Corrosion and Caustic, Embrittlement. Numerical problems based on Lime-Soda and Zeolite softening methods.

Unit 3

Unit 4
Air Pollution, Noise Pollution and Solid Waste Management: Air Pollution, Harmful effects of Air Pollution, Control of Air Pollution. Noise Pollution, Harmful effects of noise pollution, control of noise pollution. Global warming, Acid rain, Ozone depletion. Solid Waste
Management, Classification of solid waste, Collection, transportation, treatment, and disposal of solid waste. Economic recovery of solid waste. Sanitary landfill, on site sanitation.

**Unit 5**


Corrosion: Definition and its significance. Mechanisms of Chemical (Dry) and Electrochemical (Wet) corrosion. Protection from corrosion, Protective coatings, cathodic protection, sacrificial anode and modification in designs.

**Suggested Readings**

3. *Corrosion Understanding the Basic*, by Joseph R Davis, ASM International
5. *Introduction to Environmental Science*, by G Tyler Miller and Scott Spoolman, Cengage Learning

**205 ENGINEERING MECHANICS**

**Unit 1**


**Unit 2**

Centroid & Moment of Inertia: Location of centroid and center of gravity, Moment of inertia, Parallel axis and perpendicular axis theorem, Radius of gyration, M.I of composite section, Polar moment of inertia, M.I of solid bodies.


**Unit 3**


Belt Drive: Types of belts, Types of belt drives, Velocity ratio, Effect of slip on Velocity ratio, Length of belt, Ratio of tensions and power transmission by flat belt drives.

**Unit 4**
Kinematics of Particles and Rigid Bodies: Velocity, Acceleration, Types of Motion, Equations of Motion, Rectangular components of velocity and acceleration, Angular velocity and Angular acceleration, Radial and transverse velocities and accelerations, Projectiles motion on plane and Inclined Plane, Relative Motion.

Kinetics of Particles and Rigid Bodies: Newton's laws, Equation of motion in rectangular coordinate, radial and transverse components, Equation of motion in plane for a rigid body, D'Alembert principle.

**Unit 5**


Impulse and Momentum: Linear and angular momentum, Linear and angular impulse, Principle of momentum for a particle and rigid body, Principle of linear impulse and momentum for a particle and rigid body, Principle of angular momentum and Impulse, Conservation of angular momentum, Angular momentum of rigid body.

**Suggested Readings**


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**206 FUNDAMENTAL OF COMPUTER PROGRAMMING**

**UNIT – 1**

Programming in C: Structure of C Program, Concept of Preprocessor, Macro Substitution, Intermediate code, Object Code, Executable Code. Compilation Process, Basic Data types, Importance of braces ({ }) in C Program, enumerated data type, Identifiers, Scope of Variable, Storage Class, Constants, Operators & Expressions in C, Type Casting, printf( ) and scanf( ) with format specifiers, reading single character.

**UNIT – 2**

Control Statements, Command Line Arguments, Arrays in C, Pointers, Using pointers to represent arrays, Pointer & address arithmetic. Structures, using typedef.

**UNIT – 3**

Arrays of Structures & pointers, File Handling (fscanf, fprintf, feof, fopen, fclose, fread, fwrite only). Dynamic memory Allocation.

**UNIT – 4**

Functions in C, Passing Parameters (By value & Reference), using returned data, Passing arrays,
structures, array of structures, pointer to structures etc., passing characters and strings, The void pointer.

UNIT – 5


Number System: Data Representation, Concept of radix and representation of numbers in radix r with special cases of r=2, 8, 10 and 16 with conversion from radix r1 to radix r2. r’s and (r-1)’s complement, Representation of alphabets.

Suggested Readings


207 ENGINEERING PHYSICS LAB-II

1. To determine the height of water tank with the help of a Sextant.
2. To determine the dispersive power of material of a Prism for Violet Red and yellow colours of Mercury light with the help of a spectrometer.
3. To measure the Numerical Aperture of an Optical Fibre.
4. To determine the ferromagnetic constants retentivity, permeability and susceptibility by tracing B-H curve using C.R.O.
5. To study the Charge & Discharge of a condenser and hence determine time constant (Both current and voltage graphs are to be plotted.
6. To determine the high resistance by method of leakage, using a Ballistic galvanometer.
7. To verify the expression for the resolving power of a Telescope.
8. To determine the specific resistance of the material of a wire by Carey Fosters bridge.
9. To determine the specific resistance of the material of a wire by Carey Fosters bridge.

208 CHEMISTRY & ENVIRONMENTAL ENGINEERING LAB

1. To determine the hardness of water by HCL method.
2. To determine the hardness of water by EDTA method.
3. Determination of CO₂ in a water sample.
5. To determine free and residual chlorine in a given water sample.
7. Measurement of conductivity of a given sample by conductivity meter.
10. Determination of sulphate in water.

209 COMPUTER PROGRAMMING LAB

S.No. Concept to be covered in the exercise
1. Simple OS Commands, vi editor, compiling program, compiler options, linking libraries.
2. Simple input output program, integer, real, character and string. (Formatted & Unformatted), Using Command Line Arguments.
3. Conditional statement (if, if-else-if, switch-case)
4. Looping & iterations (for, while, do-while, continue, break)
5. Using Arrays (one, two and three dimensional)
6. Using Structures and Union.
7. Program using Function (with and without recursion), passing parameters by value & reference.

210 MACHINE DRAWING

Introduction to machine drawing
Dimensioning, locations and placing.
Orthographic projections: First & third angle methods
   Sheet 1: Orthographic Projections (3 Problems)
   Sheet 2: Sectional Views (3 Problems)
   Sheet 3: Riveted joints, lap joints, butt joints, chain riveting, zig-zag riveting
   Sheet 4: Screw fasteners, different threads, Nuts & bolts locking devices, set screws, foundation
   Sheet 5: Bearing, Plumber block
Instructions on free hand sketches
List of free hand sketches
   • Different type of lines
   • Conventional representation of materials
   • Screw fasteners
   • Bearing: Ball, roller, needle, foot step bearing
   • Coupling: Protected type, flange, and pin type flexible coupling
   • Welded joints
   • Belts and pulleys
   • Pipes and pipe joints
   • Valves

Suggested Readings

211 COMMUNICATION TECHNIQUES LAB

1. Phonetic Symbols and Transcriptions
2. Word Formation
3. Affixes
4. Listening and speaking Skills.
5. Words often Mis-spelt and Mis- Pronounced
6. One Word for Many.
7. Synonyms and Antonyms.
8. Seminar Presentation.
9. Group Discussion.
10. Job Interview

Suggested Readings and Packages

5. Oxford English Learning Package. (With CDs: Headway Series)
6. Tata McGraw Hills English Learning Package (With CDs)

212 DISCIPLINE & EXTRA CURRICULAR ACTIVITIES (DECA)

Component – A  Discipline:  25 Marks

The marks shall be deducted from this component for those who shall involve themselves in indiscipline/undesirable/Ragging activities or in case of penalty of marks imposed by Standing Disciplinary Committee (SDC) and approved by Head of the Institution concerned subject to a maximum of 25 marks.

Component – B  Extra Curricular Activities:  25 Marks

Marks shall be awarded for the participation of students in various Extra Curricular Activities organised by the respective institutions as per the following, subject to a maximum of 25 marks. In case student does not participate in any of the Extra Curricular Activities, he/ she shall be awarded zero(0) marks in DECA - Component B.

(i) National Cadet Corps (NCC).
(ii) National Service Scheme (NSS)
(iii) Scouts & Guide
(iv) Sports Activities
(v) Literary Activities & model
(vi) Cultural Activities
(vii) Paper Presentation/ Participation in National Conferences/ Seminars/ Workshops etc.
(viii) Blood Donation
(ix) Participation in activities of College Annual day Celebration.
(x) Organising/ Participation/ Volunteer in different activities organised by the departments/ institute
(xi) Organising/ Participation in activities of Students Chapters of ISTE, IE (I), IEEE, IETE, Vivekanand Kendra etc.