Program:	B. Tech. Integrated (Mechanical, Civil, Computer & EXTC)	Semester: I	
Course/Module: Communication Skills		Module Code: BTIME01001, BTICI01001, BTICO01001, BTIET01001	

Teaching Scheme				Evaluation Scheme	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks - 100 in Question Paper)
2	0	2	3	Marks Scaled to 50	Marks Scaled to 50

Course Objectives:

1. To equip students with basic concepts, theories and barriers of communication.
2. To build learners' confidence in interpersonal communication by reinforcing the basics of vocabulary building.
3. To enhance the learners' communication skills by giving adequate exposure in reading, writing, listening and speaking skills along with related sub-skills.
4. To strengthen their overall language and communication for better technical writing and presentation

Course Outcomes:

After completion of the course, students would be able to:

1. understand the basics of 'Communication', especially as expected and practised in the technical and business world; and improve upon listening, speaking, reading and writing skills so as to match the desired professional standards.
2. build and improve a set of professional vocabulary; and use the same aptly in presentations, e-mails, short compositions and technical descriptions.
3. understand and apply the nuances of formal letter writing and basic technical writing.

Detailed Syllabus: (per session plan)

Unit	Description	Duration
1.	**Understanding Communication:** • Communication-definition, meaning, importance and characteristics • Elements and Process of Communication • Methods of Communication (oral, written, formal, informal, verbal and non-verbal) • Networks of Communication (horizontal, vertical, diagonal and grapevine) • Barriers to Communication- Physical, mechanical, socio - psychological, linguistic, organizational and cultural barriers.	10

2.	**Vocabulary Building** • word formation process (prefix, suffix, acronyms) • Pairs of confused words • Antonyms and Synonyms • One word Substitutes • Proverbs	03
3.	**Techniques to Improve Communication** • Reading and Comprehension Skills (strategies for rapid reading, skimming, scanning, paraphrasing, inferring meaning from contexts) • writing skills (7 Cs of effective Writing, development of paragraph, summary and précis writing, effective sentences) • Listening Skills (definition, process, benefits, types, poor listening habits, barriers, effective listening • Speaking Skills(extempore and prepared speaking, basics of making an effective presentation)	08
4.	**Letter Writing** • Importance of Formal Written Communication • Layouts (complete Block, modified Block, Semi Block) • Types (request, enquiry, order, complaint, claims and adjustments, replies to all of these)	05
5.	**Technical Writing** • Technical Writing-meaning and importance • Framing Definitions; hazard notations • Technical Description of an object • Technical Description of a process	04
	Total	30

Text Books:

1. Dr. Meenakshi Raman and Dr. Sangeeta Sharma (2015 3rd Ed. 2017 Reprint), 'Technical Communication', *Oxford University Press*
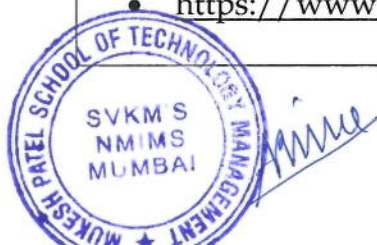
Reference Books:

1. Bovee, Thill and Chaturvedi (2017), 'Business Communication Today', *Pearson Education, 13th Edition*
2. M. Ashraf Rizvi (2017), 'Effective Technical Communication', *McGraw Hill Education, 2nd Edition*

Any other information:

1. Links to websites:
   • https://www.mindtools.com/
   • https://www.pearsonmylabandmastering.com/northamerica/mybcommlab/

2. Pedagogy:

- Classroom teaching
- classroom exercises and discussion
- case studies
- written assignments
- presentations and role play

Details of Internal Continuous Assessment (ICA)

Test Marks: 20
Term Work Marks: 30
Details of Term work:

- Group/Individual presentations
- Book review (prior reading lists to be given to students chosen by instructor)
- Letter writing
- Group Discussions
- Technical description writing
- Reading and listening comprehension
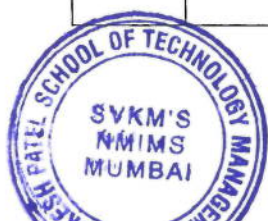
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Program:	B. Tech Integrated (Mechanical, Civil, EXTC & Computer)	Semester: I
Course/Module: Mathematics-I		Module Code: BTIME01002, BTICI01002, BTICO01002, BTIET01002

Teaching Scheme				Evaluation Scheme	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks- 100 in Question Paper)
3	0	2	4	Marks Scaled to 50	Marks Scaled to 50

Course Objectives:

1. To familiarize students with the concept of functions, limits and continuity.
2. To provide an understanding of trigonometric and inverse trigonometric functions.
3. To introduce calculus and impart knowledge of basic techniques in differential and integral calculus.

Course Outcomes:

After completion of the course, students would be able to:

1. Define and relate basic notions of sets and functions.
2. Apply basic facts, concepts and principles of trigonometry to solve physical problems.
3. Evaluate matrices, determinants, limits and examine continuity of a function.
4. Find derivatives of functions and also apply the knowledge of first and second order derivatives to analyse the function.

Detailed Syllabus:

Unit	Description	Duration
1.	**Sets and Functions:** Definition of set and function, types of function.	05
2.	**Trigonometry:** Relation between degree and radian, trigonometric ratios of compound allied and multiples angles, factorization and defactorisation, inverse trigonometric functions.	10
3.	**Limits and Continuity:** Limits, method of factorization, rationalization, infinity type, limits based on formula, continuity.	07
4.	**Derivatives and its applications:** Derivatives for exponential, logarithmic, implicit, inverse, parametric, composite functions, increasing, decreasing functions, maxima and minima.	13

5.	**Matrices and determinants:** Definition, Algebra of matrices, types of matrices, determinant, properties of determinant, minor and cofactors, adjoint and inverse of a square matrix, concept of elementary row and column operations, Inverse by row operations.	10
	Total	45

Text Books:

1. H. K. Dass, "Applied Mathematics for polytechnics", *CBS Publishers & Distributors.*

Reference Books:

1. S. P. Deshpande, Mathematics for polytechnic students, *Pune Vidyarthi Griha Prakashan.*
2. T. Veerarajan, Engineering Mathematics for first year, *Tata McGraw-Hill.*
3. H. R. Hass, C. E. Heil, M. D. Weir, Thomas' Calculus, *Pearson.*

Any other information

Details of Internal Continuous Assessment (ICA):

Test Marks: 20
Term Work Marks: 30
Details of Term work:
Tutorial/Assignments/Presentation/Viva-voce/Quiz

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Program:	B. Tech. Integrated (Mechanical, Civil, Computer & EXTC)	Semester: I	
Course/Module: Physics-I		Module Code: BTIME01003, BTICI01003, BTICO01003, BTIET01003	

Teaching Scheme					Evaluation Scheme	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per Week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks - 100 in Question Paper)	
3	2	0	4	Marks Scaled to 50	Marks Scaled to 50	

Course Objectives:
1. To enable the students to understand the basic principles of Physics.
2. To enhance the students ability to meet the needs of engineering applications.
3. To impart training to help the students develop skill sets for creating entities from basic and applied sciences.

Course Outcomes:

After successful completion of the course the students will be able to

1. Develop conceptual competence to realize the laws of nature and appreciate the interface of physics with other disciplines.

2. Interpret the relationship and interaction between nature and matter with a scientific outlook, develop scientific aptitude and appreciate the role of physics in improvement of human life and welfare of the society.

3. Explain different processes of physics that have wide applications in industrial and technological sectors.

4. Develop considerable problem solving abilities and scientific skills, viz. experimental, observational, manipulative, decision making and investigatory etc.

Detailed Syllabus: (per session plan)

Unit	Description	Duration
1.	**Physical World and Measurement:** Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures. Dimensions of physical quantities, dimensional analysis and its applications.	07

2.	**Laws of Motion:** Force: Intuitive concept of force. Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces. Friction: Static and kinetic friction, laws of friction, rolling friction, lubrication.	08
3.	**Gravitation:** Kepler's laws, Newton's law of gravitation, acceleration due to gravity, gravitational potential energy, escape speed and satellites.	06
4.	**Rotational Motion:** Vector product of two vectors, angular velocity, period and frequency of revolution, relation between linear and angular velocity, angular acceleration, angular momentum and torque, centripetal and centrifugal force, Centre of mass, Moment of inertia and theorems of perpendicular and parallel axes.	08
5.	**Fluid friction:** Pressure, pressure-depth relation ($P = \rho h g$), atmospheric pressure, Pascal's law, Archimedes' principle. Viscous force, definition of viscosity, velocity gradient, Newton's law of viscosity, coefficient of viscosity and its SI unit. Streamline and turbulent flow with examples, critical velocity, Reynold's number and its significance. Up thrust force, terminal velocity, Stokes law, and derivation of coefficient of viscosity by Stoke's method, effect of temperature and adulteration on viscosity of liquid, Bernoulli's principle.	08
6.	**Surface tension:** Cohesive and adhesive force, Laplace's molecular theory of surface tension, Surface Tension: definition and unit, effect of temperature on surface tension. Angle of contact, Capillarity and examples of capillary action, derivation of expression for surface tension by capillary rise method, applications of surface tension.	08
	Total	45

Text Books:

1. David Halliday, Robert Resnick, Jearl Walker (2015), Principles of Physics, *Wiley, New Delhi, 10th edition.*
2. Paul G. Hewitt (2015), Conceptual Physics, *Pearson education.*

Reference Books:

1. R. K. Gaur and S. C. Gupta (2008), Engineering Physics, *Dhanpat Rai & Co., New Delhi.*

2. Verma, H. C. (2010), Concepts in Physics, *Bharti Bhawan Ltd., New Delhi,* 3rd *edition.*

Any other information:

Details of Internal Continuous Assessment (ICA)

Test Marks: 20

Term Work Marks: 30

Details of Term Work:

1. Report of minimum ten experiment
2. Report of minimum two assignment covering the prescribed syllabus

List of Experiments:

1. To find the thickness of wire using a screw gauge.
2. Experiment of spherometer.
3. To find volume of solid cylinder and hollow cylinder using a Vernier caliper.
4. To find out retarding force for a simple pendulum using graphical method.
5. To determine acceleration due to gravity using simple pendulum.
6. To measure the coefficients of static and kinetic friction between a wooden block and a wooden plane.
7. Determination of Coefficient of restitution for rubber and sponge
8. To find the surface tension of a liquid by capillary rise method.
9. Determination of coefficient of viscosity using Stokes' method.
10. Measure the angle of rotation vs. time for a disc and bar. Also calculate the rotational energy and the angular momentum of the disc over the time.
11. (A) To understand the rotational motion of a rigid body. (B) To study properties of the moment of inertia and its effect on rotational motion. (C)To explore the use of least-squares fitting procedures in analyzing a dynamical system.

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Program:	B. Tech. Integrated (Mechanical, Civil , Computer & EXTC)			Semester: I	
Course/Module: Chemistry-I				Module Code: BTIME01004, BTICI01004, BTICO01004, BTIET01004	
Teaching Scheme				**Evaluation Scheme**	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks - 100 in Question Paper)
3	2	0	4	Marks Scaled to 50	Marks Scaled to 50

Prerequisite: 10th Standard Science

Course Objectives:

1. To introduce basic principles of chemistry- atom structure, mole concept, acid-base theories and electrochemistry.
2. To familiarize with the concepts and applications of water technologies, engineering materials like metals, alloys and understand corrosion.

Course Outcomes:

After completion of the course, students would be able to:

1. Understand water technologies applied in industries.
2. Apply principles of engineering materials like metals and alloys, corrosion theories and various methods to control corrosion in various real time problems.
3. Develop interest in the fundamental structure of matter, which governs the properties of matter and mole concept.
4. Interpret the acid-base theories for solving various chemical reactions and apply principles of electrochemistry in various real time problems.

Detailed Syllabus: (per session plan)

Unit	Description	Duration
1.	**Atom Structure:** Dalton's Atomic Theory, Rutherford's Scattering Experiment, Bohr's Theory of an atom, Orbits and orbitals, shapes of s, p, d orbitals, Pauli's exclusion principle, Hund's rule, Aufbau principle, Electronic configuration of first twenty elements, Definition and types of valency - electrovalency, covalency, co-ordinate valency.	07
2.	**Mole Concept:** Avogadro's number, molecular and equivalent weight, molar mass, Numericals based on the mole concept, concentration and its units, dilution of solutions and numerical based on it, determining the weight of substance present from the given volume and concentration of the solution containing the substance.	06
3.	**Water:** Sources of water, Impurities in water, hardness of water, causes of hardness, Numerical problems based on hardness calculations,	08

	Estimation of hardness of water by EDTA method, Numerical problems based on EDTA method. Disadvantages of hard water – for domestic and industrial purposes, Steam generation in Boilers – Boiler Corrosion, Scales & Sludges, Caustic Embrittlement, Priming & Foaming.	
4.	**Electrochemistry:** Nernst theory, Mechanism of electrolysis, degree of ionization. Faraday's Laws of Electrolysis-Statements and numerical problems. Electroplating-Theory and applications.	06
5.	**Metals and Alloys:** Types of metals, properties of metals-Hardness, Ductility, Malleability, Tensile Strength, Machinability, Weldability, Soldering. Alloys: Introduction, Alloys of Al, Cu (brass, bronze) (Composition, properties and uses)	06
6.	**Corrosion:** Introduction, Dry or Chemical corrosion, Wet or Electro chemical corrosion. Types of corrosion: concentration cell corrosion, galvanic corrosion, differential aeration, waterline, stress corrosion. Factors influencing rate of corrosion. Corrosion control: i. Cathodic protection techniques. ii. Protective coatings: Metallic coatings (galvanizing, tinning, sherardizing).	06
7.	**Acids and Bases:** Theories of Acids and bases-Arrhenius theory, Bronsted-Lowry concept, Lewis theory, advantages of Lewis concept, Concept of pH, pH scale, buffers. Numerical problems based on hydrogen ion and hydroxyl ion concentration.	06
	Total	**45**

Text Books:

1. Jain.P.C & Jain.M, Engineering Chemistry, Dhanpat Rai Publishing Co. New Delhi, 17th Edition, 2017.
2. Rao.A.A, Polytechnic Chemistry (Theory and Practical), New Age International, 2010.
3. Shete.S.D, Applied Chemistry, S.Chand & Co, 2018.

Reference Books:

1. Ball. D, Physical Chemistry-, Cengage Learning Inc, 2nd edition, 2015.
2. Weiner.S.A, Harrison.B, Introduction to Chemical Principles-A Laboratory Approach, 7th edition, Cengage Learning, 2010

Any other information:

Details of Internal Continuous Assessment (ICA)

Test Marks: 20
Term Work Marks: 30
Details of Term Work:

1. Two class tests.
2. Minimum eight lab experiments.
3. Viva-voce to be conducted.

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Program:	B. Tech. Integrated (Mechanical, Civil, Computer & EXTC)	Semester: I
Course/Module:	Basics of Computer System	Module Code: BTIME01005, BTICI01005, BTICO01005, BTIET01005

Teaching Scheme				Evaluation Scheme	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks - 100 in Question Paper)
2	2	0	3	Marks Scaled to 50	--

Course Objectives:

1. To create awareness of computer system functions along with the Hardware and Software.
2. To get familiarize with data representation in computer systems and computer networking.
3. Learn various utility application to create documents, presentations and Ms- Excel to manage information.

Course Outcomes:

After successful completion of this course, students will be able to:

1. Understand the basic concepts of computer systems, types of hardware and software.
2. Understand basic concepts of networks, operating systems and data representation.
3. Use MS-Office application to create documents, ppt. presentations and data management.

Detailed Syllabus:

Unit	Description	Duration
1.	**Introduction to Computer:** Introduction, Digital and Analog computers, Characteristics of Computer, History of computer, Generation and classification of computers, The computer system, Applications of computer	02
2.	**Computer System:** **Hardware:** Introduction, CPU, Memory representation, Memory Hierarchy, CPU registers, Cache memory, Primary memory, Secondary Memory, Magnetic Tapes, Magnetic Disks, Optical Disks, Magneto-Optical Disk, Input Devices and Output Devices. **Software :** Types of Software, Application Software, System Software, Operating system, Types of Operating Systems, Functions of OS, Examples of Operating Systems	06
3.	**Data Representation:** Introduction, Number System, Conversion from decimal to binary, hexadecimal.	03
4.	**Computer Network and Internet:** Introduction, Network Types – LAN, MAN, WAN, Network topologies, Network Devices, Wireless Networking, History of Internet, Connecting to Internet, Internet Connections, Internet Address, Internet Services, Use of Internet	04

5.	**Introduction to Application Software:** **MS-Word:** Word Basics, Work with Text, Format Documents, Work with Text Objects, Work with References, Work with Illustrations, Specialized Documents, Collaborate with Others Web Pages, Mail Merge.	04
6.	**MS-Excel:** Introduction, worksheets and workbooks, Entering Information: Entering data: Entering Labels and Values, Filling Cells with a Series of Data, Editing Cell Data, Find and Replace, Go To Cell Data, Go To Locking Rows and Columns By Splitting Panes, Locking Rows and Columns by Freezing Panes, Spell Check, AutoCorrect, Track Changes, Accept or Reject Changes, Comments, Adding Elements to worksheet : Images, Embedding object, Charts, Formulas and Calculations	06
7.	**MS-PowerPoint:** Introduction, Create new presentations from scratch and by using templates Add text, pictures, sounds, movies, and charts to presentations, Format the objects, Design slides using themes, colors, and special effects, Animate objects on slides to bring them to life, Use of Master Slides	05
	Total	30

Text Books:

1. Anita Goel, "Computer Fundamentals", Pearson Publication, First Edition, 2010.

Reference Books:

1. V. Rajaraman, "Fundamentals of Computers", PHI, Fifth Edition, 2010.
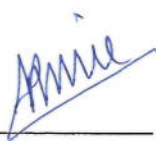
Any other information:

Details of Internal Continuous Assessment (ICA)

Test Marks: 20
Term Work Marks: 30
Details of Term Work:

1. Minimum 10 experiments covering all syllabus
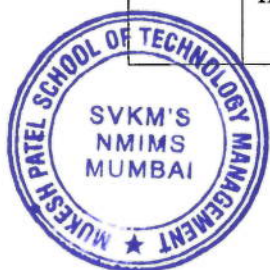2. Practical Test
3. Minimum two assignments

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Program: B. Tech. Integrated (Mechanical, Civil, Computer & EXTC)				Semester: I	
Course/Module: Engineering Drawing-I				Module Code: BTIME01006, BTICI01006, BTICO01006, BTIET01006	
Teaching Scheme				**Evaluation Scheme**	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks - 100 in Question Paper)
2	2	0	3	Marks Scaled to 50	Marks Scaled to 50

* Practical Examination conducted by school level.

Course Objectives:

1. To describe scientific facts, principals and technique of drawing in order to visualize and express the ideas.
2. To know different curves used in engineering
3. To acquire the concepts of projections of an object

Course Outcomes:

After completion of the course, students would be able to:

1. Draw the different curves used in engineering.
2. Draw the projections of points and lines.
3. Draw the projections of solids and Orthographic Projection of machine component.

Detailed Syllabus: (per session plan)

Unit	Description	Duration
1.	**Introduction:** Importance of Engineering Drawing for the study of technical course, Types of lines and dimensioning, Geometric construction. **Curves:** Conics-Parabola, Ellipse (*Oblong method, General method*), Hyperbola and Parabola (*Rectangle, General method*). **Cycloidal Curves: Cycloid, Epicycloid & Hypocycloid.**	08
2.	**Projection of Lines:** Inclined to both the reference planes (No traces and both ends of lines in one quadrant only). **Projection of Planes:** Inclined to both the reference planes for regular polygons and circles.	08
3.	**Projections of Solids:** Projection of solids like Prism, Pyramid, Cylinder and Cone inclined to both the reference Planes.	08

4.	**Section of Right regular Solids:** Sections of solids cut by inclined planes (Prism, Pyramid, Cone and Cylinder) With its true shape of section. **Development of Surfaces:** Development of Lateral surfaces of solids cut by inclined plane (Prism, pyramid, cone and cylinder)	06
	Total	**30**

Text Books:

1. M. B. Shah and B. C. Rana (2010), "Engineering Drawing", *Pearson Education.*

Reference Books:

1. N. D. Bhat (2016), "Elementary Engineering Drawing", *Charotar Publishing House.*
2. K. Venugopal (2007), "Engineering Drawing and Graphics", *New Age International Publishers.*
3. Giesecke, Mitchell, Spencer and Hill (2008), "Technical Drawing", *Macmillan Publishing Co. Inc. New York.*

Any other information:

Details of Internal Continuous Assessment (ICA)

Test Marks: 20
Term Work Marks: 30
Details of Term Work:

1. A2 size drawing sheets having 02 to 03 problems on each unit (Total 4 Sheets).

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Program:	B. Tech. Integrated (Mechanical, Civil, Computer & EXTC)	Semester: I
Course/Module: Workshop Practice-I		Module Code: BTIME01007, BTICI01007, BTICO01007, BTIET01007

Teaching Scheme				Evaluation Scheme	
Lecture (Hours per week)	Practical (Hours per week)	Tutorial (Hours per week)	Credit	Internal Continuous Assessment (ICA) (Marks - 50)	Term End Examinations (TEE) (Marks - 100 in Question Paper)
0	2	0	1	Marks Scaled to 50	--

Course Objectives:

1. To impart hand on safety precaution of different workshop practices on various trades.
2. To impart knowledge of basic tools used for different workshop jobs.
3. To familiarize students with assembling and troubleshooting of PC.

Course Outcomes:

After completion of the course, students would be able to:

1. Differentiate various tools used in workshop for fitting, welding and sheet metal fabrication.
2. Follow the appropriate safety methods for handling of tools in workshop.
3. Assemble all components to build the Personal Computer functional.
4. Troubleshoot problems of computer system.
5. Maintain Personal Computer system.

Detailed Syllabus: (per session plan)

Unit	Description	Duration
1.	**Introduction** to various workshop trades, layout. General instructions for safety in various Workshop Trades. Common accidents- causes and preventive measures. First Aid.	04
2.	**Safety Measures for Workshop Trades:** **Fitting Shop**: Introduction to fitting shop tools, common materials used in fitting shop. Description and demonstration of various types of safety precaution while work on benches, holding devices, files and hack-sawing. **Welding Shops:** Introduction to welding and its importance in engineering practice; Welding screens and other welding related equipment, accessories and gloves. Safety precautions during welding. Hazards of welding and its remedies. Precautions while	14

		using electric arc welding, Practice in setting current and voltage for striking proper arc. Earthling of welding machine. **Sheet Metal Fabrication:** Use of hand tools for sheet metal fabrication. Sheet metal fabrication of jobs involving cutting, shearing, bending, edge folding, soldering, brazing etc. Demonstration of modern tools.	
3.		**Assembling and Configuring PC:** Introduction, Components of PC, Caution and safety, Setting up the cabinet, Installing power supply unit, Installing CPU, Installing heat sink and cooling fan, Installing memory module, Mounting motherboard, Installing hard disk, Installing optical drive, Connecting motherboard power supply cables, Connecting to front panel, Connecting mouse, keyboard and monitor, Switching on the computer, Configuring BIOS, Installing operating system, Installing device drivers, Installing ad-on cards, Study of different types of network cables, Study various network connecting devices: Hub, Switches, build a small LAN network	07
4.		**Troubleshooting and Maintenance:** Safety precautions, Configuring using BIOS parameters, Power on self test, Devices and drivers, Working with windows registry, Performance improving steps, Overclocking the system, Diagnosing general problems, Computer system: common problems and solutions, Preventive maintenance, Replacing CMOS battery, Clearing BIOS password, Flashing BIOS	05
		Total	30

Text Books:

1. K. C. John (2010), "Mechanical Workshop Practice", Edition-2, *PHI Learning Pvt. Ltd.*
2. K. L. Jame (2013), "Computer Hardware": Installation, Interfacing, Troubleshooting and Maintenance, *PHI Publication.*

Reference Books:

1. Hajra Choudhary S. K., Bose S. K., Hajra Choudhary A. K., Roy Nirjhar (2013), "Elements of Workshop Technology-I", *Media promoters and Publications.*
2. Anita Goel (2010), "Computer Fundamentals", *Pearson Publication First Edition.*

Any other information:

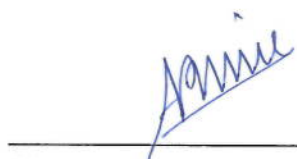**Details of Internal Continuous Assessment (ICA)**

Test Marks: --

Term Work Marks: 50

Details of Term Work:

1. Demonstration and study on safety measures on various workshop trades like fitting, welding and sheet metal fabrication.
2. Demonstration and study on Assembling of components of PC with proper configuration.
3. Report on industry / Safety Training Institute visit conducted in relevance with syllabus.

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