CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY

Courses of Study and Scheme of Examination of B.E. First Year (2005-06)
Common to all branches of Engineering except Bio-Tech. & Bio-Medical Engg.

SECOND SEMESTER

S.No	Board of Study	Subject Code	Subject	Periods Per Week			Scheme of Examination Theory			Total Marks	Credit [L+[T+P]] 2
				L	T	P	ESE	CT	TA		
1	Mech. Engg.	300211(37)	Engg. Graphics	2	-	-	80	20	20	120	2
2	Basic Sciences	300212(11)	Environment & Ecology	3	1	-	80	20	20	120	4
3	Basic Sciences	300213(15)	Applied Physics-II	3	1	-	80	20	20	120	4
4	Basic Sciences	300214(14)	Applied Maths – II	4	1	-	80	20	20	120	5
5	Mech. Engg.	300215(37)	Basic Mechanical Engg.	4	1	-	80	20	20	120	5
6	Civil Engg.	300216(20)	Basic Civil Engg.	3	1	-	80	20	20	120	4
7	Mech. Engg.	300224(37)	Engg. Graphics LAB	-	-	4	40	-	20	60	2
8	Basic Sciences	300222(15)	Applied Physics-II LAB	-	-	2	40	-	20	60	1
9	Civil Engg.	300223(20)	Basic Civil Engg. LAB	-	-	2	40	-	20	60	1
10	Computer Sc. & Engg.	300225(22)	Introduction to Computing LAB	-	1	4	40	-	20	60	3
11	Humanities	300226(46)	Group Discussion	-	-	2	-	-	40	40	1
12			Library	-	-	1	-	-	-	-	-
TOTAL				**19**	**6**	**15**	**640**	**120**	**240**	**1000**	**32**

L-Lecture, T-Tutorial, P-Practical, ESE – End Semester Exam, CT- Class Test, TA- Teacher's Assessment

Note: (i) The teaching in the 1st and 2nd semester will be divided in two groups consisting of various branches as shown below: P1-GROUP: Electronics & Communication, Information Technology, Electronics & Instrumentation, Electrical, Chemical, Electrical & Electronics; Q1-GROUP: Computer Science, Mechanical, Civil, Mining and Applied Electronics & Instrumentation, Metallurgy.

(ii) Applied Maths - I will be taught to both the groups.

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Engineering Graphics** Code: 300211 (37)
Total Theory Periods: 24 Total Tutorial Periods: 12
Total Marks in End Semester Exam: 80
Minimum number of class tests to be conducted: 02

UNIT – I

a) Importance of Engineering Drawing, Scales: Representative Fraction, Type of Scale, Plain and Diagonal Scale.

b) Engineering Curves: Conic section, Ellipse, parabola, hyperbola, Cycloidal Curves: Cycloid, Epicycloid, Hypocycloid, Involute.

[No. of Pds: 4+8]

UNIT – II

a) Projection: Introduction, Principle of Projection, method of projection, planes of projection, four quadrants, first and third angle projection, reference line symbols for methods of projection, Orthographic projection.

b) Projection of Points: Introduction point situated in first, second, third & fourth quadrant.
Projection of lines: Introduction, line parallel to one or both the planes, line contained by one or both the planes, line perpendicular to one of the planes, line inclined to one plane and parallel to other. Line inclined to both the planes. [Simple problems only]

[No. of Pds: 6+12]

UNIT – III

a) Projections of planes: Introduction, types of planes, projection of planes, projection of planes perpendicular to both the reference planes, perpendicular to one plane and parallel to the other plane, perpendicular to one plane and inclined to the other plane.

b) Projections of Solids: Introduction, types of solids, projections of solids in simple position, projections of solids with axes inclined to one of the reference planes and parallel to the other, projections of solids with axes inclined to both H.P. and the V.P., section planes, types of sections, true shape of section, section of solids.

[No. of Pds: 6+12]

UNIT – IV

a) Development of Surfaces: Introduction, methods of development, development of lateral surfaces of right solids, cube, prisms, cylinders, pyramids & cone.

b) Isometric Projection: Introduction, Isometric axes, lines & planes, Isometric scale, Isometric projection and Isometric view of simple objects.

[No. of Pds: 4+10]

UNIT – V

Computer Aided Drawing: Introduction to CAD, benefits and limitation of CAD, CAD Softwares, AutoCAD introduction, Basic Commands of AutoCAD, Concept of Layers, Dimensioning and text, Creation of two dimensional drawing.

[No. of Pd s: 4+6]

TEXT BOOKS:

(i) Bhatt, N.D., "Elementary Engineering Drawing", Charotar Book Stall, Anand
(ii) George Omura, " Mastering AutoCAD" B.P.B. Publication, New Delhi

REFERENCE BOOKS:

(i) Engineering Graphics – Laxminarayanan & V. and Vaish Wanar, R.S. Jain Brothers, New Delhi
(ii) Engineering Graphics – Chandra, AM & Chandra Satish 1998.
(iii) Engineering Graphics – K.L. Narayan and P. Kannaih, Tata McGraw Hill
(iv) A Text book of Engineering Drawing (Plane & Solid Geometry) – N.D. Bhatt & V.M. Panchal, Charotar Publishing House
(v) The Fundamental of Engineering drawing and Graphics Technology – French and Vireck, McGraw Hill.

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Environment & Ecology** Code: 300212 (11)
Total Theory Periods: 40 Total Tutorial Periods: 12
Total Marks in End Semester Exam: 80
Minimum number of class tests to be conducted: 02

UNIT – I

General: Environmental segments, environmental degradation, environmental impact assessment.
Concept of Ecosystem: Fundamental of Ecology and Ecosystem, components of ecosystem, food-chain, food-web, trophic levels, energy flow, cycling of nutrients, major ecosystem types (forest, grass land and aquatic ecosystem).

[No. of Pds: 8+2]

UNIT – II

Air Pollution: Atmospheric composition, energy balance, classification of air pollutants, source and effect of pollutants – Primary (CO, SOx, NOx, particulates, hydrocarbons), Secondary [photochemical smog, acid rain, ozone, PAN (Peroxy Acetyl Nitrate)], green house effect, ozone depletion, atmospheric stability and temperature inversion, Techniques used to control gaseous and particulate pollution, ambient air quality standards.

[No. of Pds: 8+2]

UNIT – III

Water Pollution: Hydrosphere, natural water, classification of water pollutants, trace element contamination of water, sources and effect of water pollution, types of pollutants, determination and significance of D.O., B.O.D., C.O.D. in waste water, Eutrophication, methods and equipment used in waste water treatment preliminary, secondary and tertiary.

[No. of Pds: 8+2]

UNIT – IV

Land Pollution & Noise Pollution: Lithosphere, pollutants (agricultural, industrial, urban waste, hazardous waste), their origin and effect, collection of solid waste, solid waste management, recycling and reuse of solid waste and their disposal techniques (open dumping, sanitary land filling, thermal, composting).
Noise Pollution: Sources, effect, standards and control.

[No. of Pds: 8+2]

UNIT – V

Environmental Biotechnology: Definition, current status of biotechnology in environmental protection, bio-fuels, bio-fertilize, bio-surfactants, bio-sensor, bio-chips, bio-reactors.
Pollution Prevention through Biotechnology: Tannery industry, paper and pulp industry, pesticide industry, food and allied industry.

[No. of Pds: 8+2]

TEXT BOOKS:

1. Environment and Ecology by Piyush Kant Pandey and Dipti Gupta (Sum India Publication)
2. A Textbook of Environmental Chemistry and Pollution Control by S.S. Dara (S. Chand and Company)

REFERENCE BOOKS:

1. Masters, G.M. Introduction to Environment Engineering and Science (Prentice Hall of India).
2. Environmental Chemistry by A.K. Dey (Eastern Ltd.).
3. Environmental Chemistry by B.K. Sharma (Krishna Prakashan).
4. Nebel B.J. Environmental Science (Prentice Hall of India-1987).
5. Environmental Biotechnology by S.N. Jogdand (Himalaya Publishing House).
6. Introduction to Environmental Biotechnology by A.K. Chatterji (Prentice Hall of India).

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Applied Physics - II** Code: **300213 (15)**
Total Theory Periods: **40** Total Tutorial Periods: **12**
Total Marks in End Semester Exam: **80**
Minimum number of class tests to be conducted: **02**

UNIT – I

Nuclear Physics and Electron Ballistics:

(i) Nuclear Physics: The structure of atomic nuclei, Radioactive decay and nuclear reactions, controlled and uncontrolled chain reaction, criteria of critical mass, Nuclear reactor and its site selection, Nuclear fusion in stars. Introduction of elementary particles.

(ii) Electron ballistics: Motion of charged particles in electric and magnetic field. Aston and Bainbridge mass spectrograph, Cyclotron and its energy limitations.

[No. of Pds: 8+2]

UNIT – II

Lasers & Fiber Optics:

(i) Lasers: Temporal and spatial coherence of light wave, Principle of laser, Laser characteristics, components of laser, Principle of ruby, He-Ne & semiconductor lasers, applications Basic concepts of Holography.

(ii) Fiber Optics: Optical fibers; introduction & advantages, strucrue & classification, Principle of propagation in fibers, attenuation & distortion, acceptance angle and cone, numerical aperture, basic concept of optical computing.

[No. of Pds: 8+2]

UNIT – III

Solid State Physics

Crystalline and amorphous solids, co-ordination number, atomic radius, density of packing, Miller indices, Separation between lattice planes, Symmetry elements. Structural features of nano particles. Formation of energy bands in solids (Energy level approach), Classification of Solids, Conduction mechanism in semiconductor, charge neutrality equation, Fermi level in intrinsic and extrinsic semiconductors (Qualitative approach), Dependence of Fermi level on impurity concentration and temperature, Einstein relation.

[No. of Pds: 8+2]

UNIT - IV

Solid State Devices: Drift & diffusion current, photoconductivity; photoconductors, Hall effect. Formation of P-N junction, solar cells, light dependent resistor, Photo diode, transistors: construction and operation of PNP and NPN, C-B, C-E, Configurations, Super conductivity, Meissner effect, BCS theory, Type-I and Type-II superconductors, applications, SQUIDS.

[No. of Pds: 8+2]

UNIT – V

Dielectrics and Magnetic Materials: Dielectric constant, Dielectric polarization, polar and non-polar dielectrics. Gauss's law, E, P and D vectors. Different types of polarization. Concept of internal fields, Clasius-Mossotti relationship, Langevin theory of dipolar orientation.

Magnetic Materials – diamagnetic, para-magnetic, ferro-magnetic and ferrite materials-hard & soft magnets, applications, magneto-optic effects. Antiferromagnetism.

[No. of Pds: 8+2]

TEXT BOOKS:

- Gaur and Gupta "Engineering Physics"
- Beiser, "Modern Physics", McGraw-Hill Inc., New Delhi.
- Avadhanulu and Kshirsagar "Engineering Physics".

REFERENCE BOOKS:

- Jenkins and White: “Optics”, MeGrew-Hill Book Company.
- Singh R.B. : “Physics of Oscillations and Waves”
- Ghatak A.K.: “Optics”
- Mani and Mehta: “Modern Physics”, Affiliated East-West Press Pvt. Ltd, 1998.
- Sanjeev Puri: Modern Physics, narosa Pub. Co. 2004.
- Azroff: Solid State Physics, Tata McGraw-Hill, 2004.
- Kaplan: Nuclear Physics, Narosa Publishing, 1987.
- Theraja: B.L., Basic Electronics, S.Chand, 2002.
- Puri: Digital Electronics, Tata McGraw-Hill, 2002.
- Millman, J and Halkias: integrated Electronics, Tata MeGraw-Hill, 2004.
- Tyagrajan and Ghatak: Lasers, Macmillan, 2001.
- Keiser: G Optical Fiber Communication, McGraw-Hill, 2000.

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Applied Maths - II** Code: **300214 (14)**
Total Theory Periods: 50 Total Tutorial Periods: 12
Total Marks in End Semester Exam: 80
Minimum number of class tests to be conducted: 02

UNIT – I

Complex Numbers: De Moivre's theorem, roots of complex numbers; separtion into real & imaginary parts of circular, hyperbolic, logarithmic & exponential function; summation of trigonometric series by C+iS method.

[Pds. 8+2]

UNIT – II

Differential Equations of higher order: Linear differential equations of higher order with constant coefficients, method of variation of parameters; Cauchy's & Legendre's linerar equations; simultaneous linear equations with constant coefficients.

[Pds. 10+2]

UNIT – III

Multiple Integrals: Double & triple integrals, change of order of integration; Beta & Gamma functions; application to area & volume.

[Pds. 10-3]

UNIT – IV

Vector Calculus: Vector operator ∇; directional derivative, gradient, divergence & curl; line, surface & volume integrals, Green's, Gauss's & Stoke's theorem (without proof) & applications.

[Pds. 10+3]

UNIT – V

Theory of Equations: Roots of polynomial equations, relations between roots and coefficients; transformation of equations, removal of terms; solution of cubic & biquadratic equatins-Cardon's & Ferrari's methods.

[Pds. 10+3]

TEXT BOOKS:

1. Higher Engg. Mathematics by B.S. Grewal (38^{th} edition)-Khanna Publishers.
2. Advanced Engg. Mathematics by Erwin Kreyszig (8^{th} edition) – John Wiley & Sons.

REFERNECE BOOKS:

1. Higher algebra by H.S. Hall & S.R. Knight – A.I.T.B.S. Publishers.
2. Integral Calculus by Gorakh Prasad – Pothishala Private Limited.
3. Advanced Engg. Mathematics by R.K. Jain & S.R.K. Iyengar – Narosa Publishing House.
4. Applied Mathematics by P.N. Wartikar & J.N. Wartikar Vol. (I&II) – Pune Vidhyarthi Griha Prakashan, Pune.
5. Applied mathematics for Engineers & Physicists by Louis A. Pipes – Mc Graw Hill.

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Basic Mechanical Engg.** Code: **300215 (37)**
Total Theory Periods: 50 Total Tutorial Periods: 12
Total Marks in End Semester Exam: 80
Minimum number of class tests to be conducted: 02

UNIT – I

(a) Thermodynamic System and Control Volume Thermodynamic property. Zeroth Law of thermodynamics.

(b) Work and Heat: Work and Heat as Path function, Flow work, Non-flow process versus flow process, work done in frictionless Quasi-Equilibrium process, First Law of thermodynamics:- 1st law of thermodynamics and its application to non-flow process and steady flow process.

[No. of Pds: 8+2]

UNIT – II

(a) Second law of thermodynamics: Corollary 1 and 2, Clausius inequality. Carnot cycle Entropy: - A point function, principle of increase of entropy for close system and surroundings, causes of increase in entropy, Entropy change during different thermodynamic processes.

(b) Air Cycle: Otto, Diesel, Dual combustion cycle for I.C. engines. Reversed carnot cycle for Refrigeration, Limitation of Reversed Carnot Cycle.

[No. of Pds: 10+3]

UNIT – III

(a) Properties of Steam:- Types of Steam: Wet, Saturated and Superheated Steam, Phase transformation at constant pressure, sensible heat, latent heat, superheat, Internal energy. Enthalpy. Dryness fraction, steam processes:- Constant Volume, Adiabatic, Isothermal, Polytropic, Entropy of Steam.

(b) Boiler mountings and Accessories, Classification of Boiler, Draught.

[No. of Pds: 10+3]

UNIT – IV

(a) Gas Welding: Types of Gas flame, Equipment used in high pressure and low pressure gas welding plant, Types of flux. Arc Welding: Arc Welding equipments, flux coating on welding electrodes.

(b) Machine Tools: Working, classification and specification of lathe, shaper, specification of machine tools.

[No. of Pds: 10+2]

UNIT – V

(a) Stress-Strain Curve for ductile and brittle material, types of stress, Relation between Elastic Constants, Principle of Superposition.

(b) Stress and Strain in Tension and Compression, Mechanical testing of materials for tension, compression and shear.

[No. of Pds: 10+2]

TEXT BOOKS:

1. Thermodynamics - R. Yadav (Vol. I & II)
2. Classical thermodynamics - P.K. Nag
3. Thermodynamic Approach - D.S. Kumar
4. Strength of Materials - Sadhu Singh & Ramamrutham
5. Production Technology - Hajra & Choudhary

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Basic Civil Engineering** Code: **300216 (20)**
Total Theory Periods: 40 Total Tutorial Periods: 12
Total Marks in End Semester Exam: 80
Minimum number of class tests to be conducted: 02

UNIT – I
BUILDING MATERIAL

Bricks: Nominal and actual dimensions of modular and traditional bricks. Frog. Good brick earth, moulding, characteristics of good bricks, compression test and absorption test, classification of bricks.
Cement: Raw materials, wet process for manufacture of Portland cement, intial and final setting times, use of Vicat needle apparatus, distinctions between ordinary Portland cement, Pozzolana cement and slag cement, grades of cement, uses of white cement.
Stone: Geological, physical and chemical classification of stone, important stones, uses of stone.
Steel: Different between Cast-iron, wrought iron and steel, mild steel and Tor-steel.

[No. of Pds: 8+2]

UNIT – II
BUILDING CONSTRUCTION

Mortar: Proportions of cement mortar for various uses.
Concreate: Ingredients of concrete. Meaning of M-10, M-15 and M-20 grades, and nominal mix proportions for them. Common w/c ratios. Workability. Slump test. Compression test. Curing.
Aggregate: Coarse and Fine aggregates, grading curve and fineness moduls.
Building Plans: Reading and comprehending a building plan and section. Convention of assuming the cutting plane at window sill level. Conventional symbols for representing doors etc. and electrical and sanitary fittings. Identification of footing, plinth, lintel, slab, chajja etc. on a given cross-section.

[No. of Pds: 8+2]

UNIT – III
SURVEYING

Chain Survey: Instruments used. Selection of survey-stations. Chain-lines, Off-sets, Oblique-offsets, Tie-lines, Check-lines. Ranging. Field-Book, Plotting, Survey of India Topo-sheets. Their scales and conventional symbols.
Compass Survey: The prismatic compass. Definition and types of meridian. Dip and Declination. Whole circle bearing, Fore bearing and Back bearing. Local attraction. Calculation of included angles for closed and open traverses.

[No. of Pds: 8+2]

UNIT – IV
LEVELLING

Levelling: Various parts of a Dumpy level, Temporary adjustments, Interrelationship of Bubble Tube Axis, Line of Collimation and Vertical Axis, Leveling staff, technical terms used in Levelling. Fly leveling. Profile leveling. Level field book. Arthmetical checks and problems on leveling.
Contours: Definition, Contour value. Identification of ridge, valley and other geographical features on a contoured plan.

[No. of Pds: 8+2]

UNIT – V
FOUNDATION

Bearing Capacity: Necessity of foundations, definitions of safe bearing capacity, ultimate bearing capacity and factor of safety, considerations of failure of soil and settlement of foundation for deciding ultimate bearing capacity.
Load bearing and framed construction: Load bearing wall type and framed types of constructions.

Types of foundations: Sketches of spreads footing for walls, rectangular R.C.C. footing for columns and raft-foundations for a group of columns.
Foundation Soils: Black cotton soil, its expansion and shrinkage, building cracks due to it, use of framed construction or under-reamed pile for B.C. soil, Good soils for foundation viz., moorum, yellw soil or silt and rock.

[No. of Pds: 8+2]

BOOKS RECOMMENDED

1. Comprehensive Basic Civil Engineering B.C. Punmia
2. Basic Civil Engineering by Ramamurutham
3. Surveying Vols I by B.C. Punmia
4. Building construction by Ahuja and Birdi

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: **IInd** Branch: Common to All Branches
Subject: **Applied Physics -II Lab** Code: **300222 (15)**
Total Practical Periods: 28 Total Tutorial Periods: Nil
Total Marks in End Semester Exam: 40

List of Experiments

1. To determine the surface tension by capillary/Jager's method.
2. To determine the wave length of light by Newton's rings method.
3. To determine the wave length of light by Fresnel's biprism.
4. To determin the focal length of combinatio of two thin lenses by nodal slide assembly and its verification.
5. To determine sp resistance of a wire by Carry Foster's Bridge.
6. Study of hall effect.
7. e/m by Thomson's method.
8. Study of photo – cell and determination of Planck's constant.
9. Determination of wavelength of a spectral line using diffraction grating.
10. Determination of divergence of LASER beam.
11. Determination of grating element of a diffraction grating using LASER beam.
12. Verification of DeMorgan's Laws of Boolean Algebra.
13. To determine the coefficient of viscosity of a liquid by capillary flow/stoke's method.
14. To determine the frequency of A.C. mains using Sonometer.
15. To determine the moment of inertia of Flywheel.
16. To determine the Forbidden energy gap of Semiconductor diode.
17. To determine the Mechanical equivalent of heat (J) by Calender & Barne's method.
18. To determine the numerical aperture (NA) of the given fiber cables.

REFERENCE BOOKS:

- Jenkins and White: "Optics", MeGrew-Hill Book Company.
- Singh R.B. : "Physics of Oscillations and Waves"
- Ghatak A.K.: "Optics"
- Mani and Mehta: "Modern Physics", Affiliated East-West Press Pvt. Ltd, 1998.
- Sanjeev Puri: Modern Physics, narosa Pub. Co. 2004.
- Azroff: Solid State Physics, Tata McGraw-Hill, 2004.
- Kaplan: Nuclear Physics, Narosa Publishing, 1987.
- Theraja: B.L., Basic Electronics, S.Chand, 2002.
- Puri: Digital Electronics, Tata McGraw-Hill, 2002.
- Millman, J and Halkias: integrated Electronics, Tata MeGraw-Hill, 2004.
- Tyagrajan and Ghatak: Lasers, Macmillan, 2001.
- Keiser: G Optical Fiber Communication, McGraw-Hill, 2000.

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: IInd
Subject: **Basic Civil Engineering - Lab**
Total Practical Periods: 28
Total Marks in End Semester Exam: 40

Branch: Common to All Branches
Code: **300223 (20)**
Total Tutorial Periods: Nil

List of Experiments

1. Compression test and absorption test on bricks.
2. Initial setting time of cement.
3. Sieve analysis and F.M. of fine aggregate.
4. Sieve analysis and F.M. of coarse aggregate.
5. Moulding and compressive strength test of concrete cubes.
6. Chain survey of (maximum eight corner) irregular figure using single chain line.
7. Chain survey of about 100 x 100 sq.m. in area (with road, hedge, poles, trees etc.)
8. Compass survey of a five corner polygon.
9. Location of 2 or 3 trees, poles, etc. by method of radiation and intersection from ends of a base line by using compass.
10. Determine difference in level between two given stations.
11. Fly leveling using about two change points.
12. Profile leveling of about 100 metre long straight line.

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: IInd | Branch: Common to All Branches
Subject: **Introduction Computing Lab** | Code: **300225 (22)**
Total Practical Periods: 50 | Total Tutorial Periods: 12
Total Marks in End Semester Exam: 40

UNIT – I
AN OVERVIEW OF COMPUTER SYSTEM:
Anatomy of digital computers, Memory units, Main and Auxiliary storage, Devices, Input Output, Classification of Computers, Applications of Computers in different fields, radix number system: decimal, binary, octal, hexadecimal numbers and their inter conversions.

[No. of Tut.: 2]

UNIT – II
OPERATING SYSTEM BASICS:
The User Interface, Running programs, Managing files, Introduction to PC operating systems: Dos (Introduction of DOS, its features, basic Internal and External commands), Introduction to Windows and it's features.

[No. of Tut.: 2]

UNIT – III
INTRODUCTION TO MS-OFFICE:
Introduction to MS-WORD, document creation, editing, printing and saving, spell check and mail merge, Process text by using text processor package such as MS-WORD (Bold, Italics, Underline, Fonts, Text Alignment, Boarders and Shading, Header and Footer) Introduction to Windows and it's features. MS-Excel spread sheet, Sorting, Merging, Drawing Graphics, Introduction to MS Power Point.

[No. of Tut.: 2]

UNIT – IV
INTRODUCTION TO COMPUTER NETWORKS AND DATA COMMUNICATION: Introduction to the basics concepts of Networks and Data communication how computer network works, LAN, MAN, WAN, Major features of INTERNET, Internet history, Introduction to the protocols, http, SMTP, FTP, Using the Internet, E-mails FTP search engines and domains.

[No. of Tut.: 2]

UNIT – V
PROGRAMMING LANGUAGES:
Programming fundamentals, problem definitions, Algorithms, flow charts and symbols, Machine language, assembly language, high level language, Assemblers, Compliers Interpreters, Linkers, Loaders, and their inter relationship, Debuggers. Simple programs using C.

[No. of Tut.: 4]

TEXT BOOKS:

- Fundamentals of Computer Programming and Information Technology, by J.D. Dixit & Sangeeta Dixit, Laxmi Publication, New Edition – 2004.
- "Exploring Internet", Nd Global.
- "A First Course in Programming with C" by T Jeyapoovan, Vikas publishing House pvt. Ltd. New Delhi

REFERECNE BOOKS:

- "Fundamentals of Information Technology" by Chetan Shrivastava, Kalyani Publication Noida.
- "Computer Fundamentals", 3rd Edition by Pradeep Sinha & Pritit sinha, BPB Publication.
- "Computer Today", Edition 2004 by Suresh K. Galgota Publication.

- "Teach your self all about computer", Barry Press and Marica Press 2000, IDG books India.
- "Using Computers and Information", by Jack B. Rochester, 1996, Que Edition & Training.
- "Let Us C" by Yashvant kanetkar, BPB Publication, Third Edition – 1999.

On the Basis of the syllabus given the following lab course is to be performed

GUIDELINE FOR LAB COURSE

(A) Getting acquainted with Operating System
- A.1. Practice on DOS Internal Commands.
- A.2. Practice on DOS External Commands.
- A.3. Basic working steps on MS Windows

Reference " MS-DOS Reference Manual"

(B) Working on INTERNET:
- B.1. Internet Connection, Logging On & OFF, Browsing
- B.2. Exploring the Browser, E-Mail, Address Book
- B.3. Net meeting.

Reference "Exploring Internet" ND Global

(C) Programming Practice:
- C.1. Sufficient practice to analyze physical problems before writing program codes in needed.
- C.2. Programming practice on control structures, functions Arrays etc.

Reference: "A First Course in Programming with C" by T Jeyapoovan Vikas publishing House Pvt. Ltd. New Delhi

[No. of Practical Pds.: 48]

Chhattisgarh Swami Vivekanand Technical University Bhilai (C.G.)

Semester: IInd
Subject: **Group Discussion**
Total Practical Periods: 12
Total Marks in End Semester Exam: 40

Branch: Common to All Branches
Code: **300226 (46)**
Total Tutorial Periods: NIL

Topics to be covered in tutorial:

- Myths connected with GD
- How to deal with GD topics
- Interpersonal Skills
- Problem Solving Skills
- Individual Behaviour and Personality
- Group Behaviour
- Functional and Dysfunctinal Behaviour
- Leadership & Display of Leadership Qualities
- Effective Intervention
- Do's and Don'ts
- Common Mistakes in GD
- Practical Tips

[24 Periods]

Suggested References:

- Krishna Mohan & Meera Banerjee-"Developing Communication Skills", Mac Millan India Ltd. New Delhi, 2001.
- Rajendra Pal and JS Korlahalli – "Essentials of Business Communication", Sultan Chand and Sons, 1997.