



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **COMMUNICATIONSKILLS**

SUBJECT CODE: **DE 21**

COURSE CONTENTS

MODULE-1

COMMUNICATION PROCESS AND ITS NEEDS

- 1.1 (i) How to make communication effective
- (ii) Barriers in communication, Removal of barriers
- 1.2 Grammar and vocabulary for correct English usage.
 - (I) Determiners, Prepositions, Auxiliary verbs and subject-verb agreement
 - (II) Rewrite as directed (change voice, correct form of verbs/ tenses)
 - (III) Vocabulary– One word substitution, words often misused and wrongly spelt.

MODULE -2 PASSAGES OF COMPREHENSION

- 2.1 Prescribed passages (six from existing syllabus)
 - (I) Language of Science
 - (II) Desalination or Desalting Process
 - (III) Safety Practices
 - (Iv) Non-conventional Sources of Energy
 - (v) Our Environment vi Entrepreneurship
- 2.2 Writing summary, moral and characterization of any one story from the book prescribed.

MODULE -3

BUSINESS COMMUNICATION (One question with internal choice)

- 3.1 Principles of effective business
Correspondence Its parts, mechanics, styles and forms
- 3.2 Application for job, Bio-Data and C.V.
- 3.3 Letter of Enquiry
- 3.4 Placing order
- 3.5 Complaint



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

MODULE -4

COMPOSITION & TRANSLATION

- 4.1 Writing paragraphs of 150 words on topics of importance of computers, importance of communication skill, importance of science and technology etc.
- 4.2 Translation (Hindi to English and vice- versa).

MODULE -5

UNSEEN PASSAGES & PRECIS WRITING

- i Answer the questions based on the passage.
- ii Give suitable title OR
- iii Writing Précis

LIST OF EXPERIMENT

1. Basic Grammar & Vocabulary (Synonyms /Antonyms, Analogies, sentence completion, correctly spelt words, idioms, proverbs, common errors).
2. phonetic symbols and pronunciation.
3. Listening skills (Including Listening Comprehension)3
4. Reading Skills (Including Reading Comprehension)
5. Writing Skills (Including structuring resume and cover letter)
6. Speaking Skills
7. Body Language
8. Oral Presentation : Preparation and delivery using audio – visual aids with stress n body language and voice modulation (Topic to be selected by the teacher.) Final Assessment Should be based on Assignment, presentation and interview.



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **COMMUNICATIONSKILLS**

SUBJECT CODE: **DE 21**

REFERENCES

1. English Conversation Practice -Grant Taylor
2. Practical English Grammar -Thomson & Martinet
3. Communication Skills for Technical Students Book – I,
4. Book – II -M/S Somaiya Publication, Bombay
5. Living English Structure S. Allen
6. English Grammar, Usage, and Composition
7. Tickoo & Subramanian, S. Chand & Co. Standard Allen Longman.
8. Essentials of Business Communication
9. Dr. Rajendra Pal & J.S. Korlahalli S.Chand & Sons, New Delhi.
10. Effective Business Communication
11. M.V. Rodriques, Concept Pub. Co., New Delhi.
12. Communication for Business
13. Shirely Taylor, Longman, England.
14. Communication for Engineers and Professors
15. P. Prasad, S.K.Kataria and sons publications, New Delhi
16. Technical English Book-II, -Somaya Publications, New Delhi



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **ENGINEERING MATHEMATICS**

SUBJECT CODE: **DE 22**

COURSE CONTENTS

MODULE -1

Function and Limit

Function

Definitions of variable, constant, intervals such as open, closed, semi-open etc. Definition of Function, value of a function and types of functions, Simple Example

Limits

Definition of neighborhood, concept and definition limit functions with simple examples. Limits of algebraic, trigonometric, exponential and logarithmic functions with simple examples.

MODULE -2

Derivatives

Definition of Derivatives, notations, Derivatives of Standard Functions, Rules of Differentiation. (Without proof). Such as Derivatives of Sum or difference, scalar multiplication, Product and quotient. Derivatives of inverse and inverse trigonometric functions. Derivatives of Implicit Function. Logarithmic differentiation, Derivatives of parametric Functions. Derivatives of one function w.r.t another function

Second order Differentiation

MODULE -3

Statistics And Probability

Statistics

Measures of Central tendency (mean, median, mode) for ungrouped and grouped frequency distribution. Graphical representation (Histogram and Ogive Curves) to find mode and median. Measures of Dispersion such as range, mean deviation, Standard Deviation, Variance and coefficient of variation. Comparison of two sets of observations.

Probability

Definition of random experiment, sample space, event, Occurrence of event and types of events (impossible, mutually exclusive, exhaustive, equally likely). Definition of Probability, addition and multiplication theorems of Probability.



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

NOTE: Chapter 4 is for Civil, Electrical, Electronic and Mechanical Groups

MODULE -4

Applications of Derivative

Geometrical meaning of Derivative, Equation of tangent and Normal

Rates and Motion

Maxima and minima

Radius of Curvature

Complex number

Definition of Complex number. Cartesian, polar, Exponential forms of Complex number. Algebra of Complex number (Equality, addition, Subtraction, Multiplication and Division) De-Moivre's theorem (without proof) and simple problems. Euler's form of Circular functions, hyperbolic functions and relations between circular & hyperbolic functions.

TEXT BOOKS

- | | |
|----------------------|--|
| Robert T Smith | -Calculus :Single Variable-Tata McGraw Hill |
| Dass H.K. | -Advanced Engineering Mathematics - S.Chand Publication, New Delhi |
| S.C Gupta and Kapoor | -Fundamentals of Mathematical Statistics- S.Chand Publication, New Delhi |
| B.SGrewal | -Higher Engineering Mathematics - Khanna Publication, New Delhi |
| P. N. Wartikar | -Applied mathematics - Pune Vidyarthi Griha Prakashan, Pune. |



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

Tutorial No.	Topic on which tutorial is to be conducted
1.	Function
2.	Limit
3.	Derivative
4.	Derivative
5.	Derivative
6.	Statistics
7.	Statistics
8.	Statistics
9.	Probability
10.	Probability
11.	Application of derivative / numerical solution of algebraic equation
12.	Application of derivative / numerical solution of algebraic equation
13.	Complex number/numerical solution of simultaneous equations
14.	Complex number/numerical solution of simultaneous equations



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **APPLIED SCIENCE (MECHANICAL)**

SUBJECT CODE: **DE 23**

COURSE CONTENTS

MODULE -1

Kinematics

Rectilinear Motion

Equations of Motions $v = u + at$, $s = ut + \frac{1}{2}at^2$, $v^2 = u^2 + 2as$ (only equation), Distance Traveled by particle in n^{th} second, Velocity Time Diagrams -uniform velocity, uniform Acceleration and uniform retardation, equations of motion for motion under gravity.

Angular Motion

Definition of angular displacement, angular velocity, angular acceleration, Relation between angular velocity and linear velocity, Three equations of circular motion (no derivation) angular distance traveled by particle in n^{th} second (only equation), Definition of S.H.M. and S.H.M. as projection of uniform circular motion on any one diameter, Equation of S.H.M. and Graphical representation of displacement, velocity, acceleration of particle in S.H.M. for S.H.M. starting from mean position and from extreme position.

MODULE -2

Kinetics

Definitions of momentum, impulse, impulsive force, Statements of Newton's laws of motion and with equations,

Applications of laws of motion —Recoil of gun, Motion of two connected bodies by light inextensible string passing over smooth pulley, Motion of lift.

Work, power, Energy

Definition of work, power and energy, equations for P.E. K.E., Work energy principle, Representation of work by using graph, Work done by a torque (no derivation).

MODULE -3

Non –destructive testing of Materials.

Testing methods of materials -Destructive and Nondestructive, Advantages and Limitations of N.D.T., Names of N.D.T. Methods used in industries, Factors on Which selection of N.D.T. depends, Study of Principle Working, Advantages, limitations, Applications and Application code, Ultrasonic, Thermography.



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MODULE -4

Acoustics and Indoor Lighting of Buildings

Acoustics

Weber and Fletcher's law, limit of intensity and loudness, echo, Reverberation and reverberation time (Sabine's formula) ,Timbre (quality of sound), Pitch or Frequency of sound. Factors affecting Acoustical planning of auditorium -- echo, reverberation, creep, focusing, standing wave, coefficient of absorption, sound insulation, noise pollution and the different ways of controlling these factors.

Indoor lighting

Definition of luminous intensity, intensity of illumination with their SI units, Inverse square law and Photometric equation, Bunsen's photometer — ray diagram, working and applications, Need of indoor lighting ,Indoor lighting schemes and Factors Affecting Indoor Lighting



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EXPERIMENTS

1. To represent simple harmonic motion with the help of vertical oscillation of spring and to determine spring constant (K) (Stiffness Constant)
2. To determine time period of oscillation of compound bar pendulum and calculate acceleration due to gravity.
3. To determine the velocity of sound by using resonance tube
4. To compare luminous intensities of two luminous bodies by using Bunsen's photometer.
5. To determine Joule's constant (J) by electric method
6. To determine wavelength of Sodium light by using Newton's rings
7. To determine frequency of sound by using sonometer .
8. To calculate refractive index of material of prism using spectrometer device .

Text Books:		
Name of Authors	Titles of the Book	Name of the Publisher
V. Rajendran	Physics-I	Tata McGraw - Hill
Arthur Beiser	Applied physics	Tata McGraw - Hill
R.K.Gaur and S.L.Gupta	Engineering Physics	Dhanpatrai



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **ENGINEERING MECHANICS**

SUBJECT CODE: **DE 24**

COURSE CONTENTS

MODULE -1

COMPOSITION AND RESOLUTION OF FORCES

Definition , Effect, characteristics of force System of Forces Principle of Transmissibility of Forces
Concept of Resultant Force Law of –Parallelogram of Forces Triangle of Forces Polygon of Forces.
Determination of Resultant of two or more concurrent forces (analytically and graphically)

MODEL-2

PARALLEL FORCES AND COUPLES

Classification of Parallel Forces Methods of finding resultant Force of parallel forces- analytically &
graphically Position of resultant force of parallel forces Definition, Classification and characteristics of a
force Couple, moment of couple

MODULE -3

MOMENTS AND THEIR APPLICATIONS

Definition, Types and law of moment Varignon's Principle of moment and its
Applications Lever and its Applications. Types of supports and determination of support reactions of a
simply supported beam subjected to point load and uniformly distributed load (UDL)

MODULE -4

EQUILIBRIUM OF FORCES

Equilibrium of a system of concurrent forces Conditions and types of Equilibrium Lami's Theorem and
its applications.

MODULE -5

CENTRE OF GRAVITY

Difference between Centroid and Center of Gravity (CG) Centroid of standard plane figures and CG of
simple solid bodies Method of finding out Centroid of composite plane laminas and cut sections
Method of finding out CG of Composite solid.



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DIPLOMA IN ENGINEERING (COMMON)

MODULE -6

FRICITION: Concept and types of friction Limiting Friction, coefficient of friction, angle of friction, angle of repose Laws of friction (Static and Kinetic) Analysis of equilibrium of Bodies

MODULE 7

SIMPLE LIFTING MACHINES

Concept of lifting Machines Definition of Mechanical Advantage, Velocity n. Ratio and Efficiency of Machines and their relation Reversibility of Machines and condition for self locking machine Law of Machines, Maximum mechanical advantage and maximum efficiency of machine Friction in machine (In terms of Load and effort) Calculation of M.A., V.R. and efficiency of following machines:

Simple wheel and axle

Differential wheel and axle

Single purchase crab and Double purchase crab

Simple screw jack and Different System of simple pulley blocks

MODULE -8

MOTION OF A PARTICLE

Definition of speed, velocity, acceleration, uniform velocity, uniform acceleration and variable acceleration Motion under constant acceleration/ retardation (equations of motion) Motion under force of gravity Concept of relative velocity Definition of projectile, velocity of projection angle of projection, time of light, maximum height, horizontal range and their determination Definition of angular velocity, angular acceleration and angular displacement Relation between linear and angular velocity of a particle moving in a circular path Motion of rotation under constant angular acceleration.

MODEL-9

LAWS OF MOTION

Newton's Laws of motion and their applications.

MODEL-10

WORK, POWER AND ENERGY

Definition unit and graphical representation of work Definition and unit of power and types of engine power and efficiency of an engine. Definition and concept of Impulse Definition, unit and types of energies.Total energy of a body falling under gravity



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **ENGINEERING MECHANICS**

SUBJECT CODE: **DE 24**

LIST OF EXPERIMENTS

1. To verify the Law of triangle of forces and Lami,s theorem.
2. To verify the Law of parallelogram of Forces.
3. To determine the moment of inertia of fly wheel by falling weight method.
4. To determine the coefficient of Friction between two given materials by inclined plane.
5. Determination of forces in the members of jib Crane.



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DIPLOMA IN ENGINEERING (COMMON)

REFERENCES

1. A text book of Applied Mechanics – R.S. Khurmi , S.C. Chand & Co. , New Delhi
2. Applied Mechanics – I.B. Prasad, Khanna Publishers, New Delhi
3. Applied Mechanics (Hindi) – R.S. Jog, Anand Publishers, Gwalior
4. Applied Mechanics (Hindi) – A.R. Page, Deepak Prakashan, Gwalior



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **BASIC CHEMISTRY**

SUBJECT CODE: **DE 25**

COURSE CONTENTS

MODULE- 1

ATOMIC STRUCTURE AND RADIO ACTIVITY

Discovery of electron, proton, neutron and nucleus. Rutherford's and Bohr's model of an atom. Bohr-Bury scheme of filling the electrons in various orbits. Idea of s,p,d,f orbital. Alpha, Gamma and Beta rays, theory of radio activity, Group displacement law, half life period, numerical problems on half life period, fission and fusion.

MODULE -2

SURFACE CHEMISTRY AND ITS APPLICATION

True solution, colloidal solution and suspension, lyophobic and lyophilic colloids, optical and electrical properties of colloids, coagulation, coagulants, idea about gels and emulsions.

MODULE -3

ELECTROCHEMISTRY

Electrolysis, Faraday's laws of electrolysis, Numerical problems on Faraday's Law, Electroplating of copper and nickel.

MODULE -4

COLLIGATIVE PROPERTIES

Osmosis & osmotic pressure, Relative vapour pressure and Raoult's law. Internal energy (enthalpy) Entropy, Entropy fusion free energy, Effect of change in temperature catalysis.

MODULE -5.

CHEMICAL BONDING AND CATALYSIS

Bonding: Nature of bonds- Electrovalent, Co-valent, coordinate and hydrogen bond. Catalysis: Types, theory characteristic, positive, negative, auto and induced catalyst. Catalytic Promoter and catalytic inhibitors. Industrial Application of catalysis plastics, Compounding and Moulding constituents.



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DIPLOMA IN ENGINEERING (COMMON)

MODULE -6

WATER

Sources of water, types of water, hardness of water, its causes, types and removal, Boiler feed water, harmful – effects of hard water in boiler. Municipal water supply. Numerical on soda lime process. Determination of hardness of water by O. Hener's, EDTA and soap solution method.

MODULE -7

METALS AND ALLOYS

Physical and chemical properties of metals, copper, iron, aluminum, tin, nickel. General principal of metallurgy, minerals/ ores, ore dressing, roasting, smelting, bassemmerisation, fluxes, purification. Explanation of alloying purposes, methods of alloying, composition and uses of alloy like brass, bronze, duralium, German silver, gun metal, solder, stainless steel, casting and bearing alloy.

MODULE -8.

IONIZATION, PH VALUE CORROSION AND PROTECTION

Arrhenius theory of ionization, factors affecting ionization. pH meaning (numerical), Buffer solutions and Buffer actions, choice of indication (acidimetry and alkalimeter). Explanation of corrosion, types of corrosion, factors effecting corrosion, corrosion control (protection against corrosion), metal and organic coating for corrosion control.

MODULE -09

GLASS, CEMENT AND REFRACTORY

GLASS:

Basic raw materials for glass, composition and manufacture of glass, varieties of glass and annealing of glass,.

CEMENT :

Constituting compounds in cement, Composition of Portland Cement, its manufacture, setting and hardening of cement.

REFRACTORIES : Meaning, characteristics , use of common refractory materials. Polymerization and condensation, classification of plastics, Compounding and Molding constituents of plastics.

MODULE -10

HIGH POLYMERS, RUBBER AND INSULATORS

Preparation Properties and uses of PVC, polyethene, polystyrene, polyamides, polyesters, Bakelite.



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DIPLOMA IN ENGINEERING (COMMON)

Synthetic fibers –nylon, rayon, decron, and polyesters. Definition characteristics, classification and properties of insulators. Glass, wool and thermocole. Idea about rubber and vulcanization.

MODULE -11

LUBRICANTS, PAINTS AND VARNISHES

Lubricants: Meaning, type and theory of lubricants, properties of a good lubricants, Flash and fire point and cloud point, emulsification number, viscosity. Paints and Varnishes: Meaning, ingredients and characteristics of good paints and varnishes, their engineering applications.

MODULE -12

FUELS, FIRE EXTINGUISHERS AND EXPLOSIVES

Classification of fuel, gross and net calorific value, Determination of a solid fuel by bomb calorimeter , octane and octane number. Proximate analysis of fuel, its utility, crude petroleum, products of fractional distillation .Fire extinguishers – Description and use. Explosives – Meaning, types, characteristic and use of explosives. Name Dynamite, lead azide, T.N.T., Picric acid, R.D.X..

MODULE -13

POLLUTION AND CONTROL

Introduction and chemical toxicology, air and water pollution, control of air and water pollution. Harmful effect of different gases like carbon mono-oxide, carbon dioxide, sulphur dioxide, nitric oxide, nitrous and lead.

LIST OF EXPERIMENT

1. To identify one Anion and Cation in a given sample.
2. Determination of flash point and fire point of a given sample of oil by Abel's apparatus.
3. Determination of viscosity by Red Wood Viscometer no.1 and no.2.
4. Redoximetry Titration :
 4. Percentage of Iron in given sample of alloy.
 - Determination of strength of ferrous ammonium sulphate.
 - Determination of strength of anhydrous ferrous sulphate and ferrous sulphate.
5. Determination of hardness of water by :
 - a). EDTA Method and Soap Solution Method



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DIPLOMA IN ENGINEERING (COMMON)

6. Determination of solid content in the given sample of water.
5. Determination of percentage of moisture in the given sample of coal by proximate analysis.

REFERENCES

1. PHYSICAL CHEMISTRY – BAHL AND TULI
2. INORGANIC CHEMISTRY – SATYAPRAKASH
3. MODERN TEXT BOOK OF APPLIED CHEMISTRY – DR. G. C. SAXENA, JAIN PRAKASHAN, INDORE
4. APPLIED CHEMISTRY - DR. G. C. SAXENA, DEEPAK PRAKASHAN, GWALIOR
5. APPLIED CHEMISTRY -SHRIVASTAVA & SINGHAL, PBS PUBLICATION, BHOPAL
6. ENGINEERING CHEMISTRY -UPPAL
7. ENGINEERING CHEMISTRY -RAO AND AGARWAL
8. ENGINEERING CHEMISTRY -P.C. JAIN
9. POLYMER CHEMISTRY -O.P. MISHRA
10. APPLIED CHEMISTRY H.N. SAHNI, DEEPAK PRAKASH



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **DEVELOPMENT OF LIFE -I**

SUBJECT CODE: **DE 26**

COURSE CONTENTS

MODULE -1

IMPORTANCE OF DLS,

Introduction to subject, importance in present context ,application

MODULE -2

INFORMATION SEARCH

Information source –Primary, secondary, tertiary Print and non – print, documentary, Electronic Information center, Library , exhibition, Government Departments. Internet Information search – Process of searching, collection of data –questionnaire , taking Interview , observation method.

MODULE – 3

WRITTEN COMMUNICATION

Method of note taking

Report writing –Concept, types and format.

MODULE – 4

SELF ANALYSIS

Understanding self —Attitude, aptitude, assertiveness, self esteem, Confidence buildings. Concept of motivation.

MODULE – 5

SELF DEVELOPMENT

Stress Management –Concept, causes, effects , remedies to Avoid / minimize stress.Health Management – Importance, dietary guidelines and exercises. Time management - Importance, Process of time planning, Urgent Vs importance, Factors leading to time loss and ways to handle it ,Tips for effective time management.emotion-concept, types, controlling, emotional intelligence. creativity-concept, factors enhancing creativity.goal setting – concept, setting smart goal.

MODULE – 6

STUDY HABITS

Ways to enhance memory and concentration. Developing reading skill.Organisation of knowledge,



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

Model and methods of learning.

Text Books:

Name of Authors	Titles of the Book	Name of the Publisher
Marshall Cooks	Adams Time management	Viva Books
E.H. Mc Grath S.J.	Basic Managerial Skills for All	Pretice Hall of India, Pvt Ltd
Allen Pease	Body Language	Sudha Publications Pvt. Ltd.
Lowe and Phil	Creativity and problem solving	Kogan Page (I) P Ltd
Adair, J	Decision making & Problem Solving	Orient Longman
Bishop , Sue	Develop Your Assertiveness	Kogan Page India
Marion E Haynes	Make Every Minute Count	Kogan page India
Pearson Education Asia	Organizational Behavior	Tata McGraw Hill
Michael Hatton (Canada – India Project)	Presentation Skills	ISTE New Delhi
--	Stress Management Through Yoga and Meditation	Sterling Publisher Pvt Ltd
Richard Hale ,Peter Whilom	Target setting and Goal Achievement	Kogan page India
Chakravarty, Ajanta	Time management	Rupa and Company
Harding ham .A	Working in Teams	Orient Longman



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

Suggested List of Assignments/ Tutorial :	
S.No	The Term Work Will Consist Of Following Assignments.
1	Library search: - Visit your Institute's Library and enlist the books available on the topic given by your teacher. Prepare a bibliography consisting name of the author, title of the book, publication and place of publication.
2	Enlist the magazines, periodicals and journals being available in your library. Select any one of them and write down its content. Choose a topic for presentation.
3	Attend a seminar or a guest lecture, listen it carefully and note down the important points and prepare a report of the same.
4	Visit to any one place like historical/ office/ farms/ development sites etc. and gather information through observation, print resources and interviewing the people.
5	Prepare your individual time table for a week – (b) List down your daily activities. (c) Decide priorities to be given according to the urgency and importance of the activities. (d) Find out your time wasters and mention the corrective measures.
6	Keep a diary for your individual indicating - planning of time, daily transactions, collection of good thoughts, important data, etc
7	Find out the causes of your stress that leads tension or frustration .Provide the ways to Avoid them or to reduce them.
8	Undergo the demonstration on yoga and meditation and practice it. Write your own views, feeling and experiences on it.
Note:- These are the suggested assignment for guide lines to the subject teacher. However the subject teachers can select, design any assignment relevant to the topic, keeping in mind the objectives of this subject.	



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

SEMESTER: **SECOND**

NAME OF COURSE: **PROFESSIONAL PRACTICES**

SUBJECT CODE: **DE 27**

COURSE CONTENTS

MODULE -1

INDUSTRIAL VISITS:

Structured industrial visits be arranged and report of the same should be submitted by the individual student, to form part of the term work.

Visits to any two of the following:

- i) Nearby Petrol Pump.(fuel, oil, product specifications)
- ii) Automobile Service Station (Observation of Components / aggregates)
- iii) Engineering Workshop(Layout, Machines)
- iv) Dairy Plant / Water Treatment Plant

MODULE -2

Lectures by Professional / Industrial Expert / Student Seminars based on information search to be organized from any THREE of the following areas :

- i) Pollution control.
- ii) Non destructive testing.
- iii) Acoustics.
- iv) Illumination / Lighting system.
- v) Fire Fighting / Safety Precautions and First aids.
- vi) Computer Networking and Security.
- vii) Topics related to Social Awareness such as – Traffic Control System, Career opportunities, Communication in Industry, Yoga Meditation, Aids awareness and health awareness.

MODULE -3

GROUP DISCUSSION:

The students should discuss in a group of six to eight students and write a brief report on the same as a part of term work. Two topics for group discussions may be selected by the faculty members. Some of the suggested topics are –



SARVAPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL (M.P.)

DIPLOMA IN ENGINEERING (COMMON)

- i) Sports
- ii) Current news items
- iii) Discipline and House Keeping
- iv) Current topics related to mechanical engineering field.

MODULE -4

STUDENT ACTIVITIES:

The students in a group of 3 to 4 will perform any one of the following activities (others similar activities may be considered.

Activity :

- i) Collect and study IS code for Engineering Drawing..
- ii) Collecting information from Market: Nomenclatures and specifications of engineering materials.
- iii) Specifications of Lubricants.
- iv) Draw orthographic projections of a given simple machine element using and CAD software.